A STUDY OF HIGH SCHOOL FAILURES

by

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Chapter I

INTRODUCTION

During the Fall semester of the school year 1923-24, in the Phoenix Union High School, Phoenix, Arizona, some three hundred and eighteen pupils failed in one or more subjects. During the same time, about four hundred eleven other pupils in the same school made the highest grade, "A", in one or more subjects. The enrollment in the high school at that time was 1689.

This state of affairs, together with the fact that the writer was looking for a research problem, right then, was the beginning of this study.

The problem can be stated simply.

"Why did these three hundred members of the student body fail, while four hundred of their classmates were doing excellent work?"

The general plan of this study is to compare these two groups of pupils, the "A" or excellent group with the "F" or failing group, in a large number of ways, which will be explained in detail, later.

The two tables on the following page show the number of failures or the number of A's made by each pupil, and also the distribution of the A and the F-pupils among the four grades of the high school.

Table I

PUPILS FAILING IN ONE OR MORE SUBJECTS

Grade	Number of subjects One	Two	Three	Four	Total	Pupils in class	Percent failing
12th	12	3	1	1	17	287	5.9%
11th	43	16	1	0	60	385	15.5%
10th	68	29	10	0	107	435	24.6%
9th	88	34	10	2	134	582	23.0%
Totals	212	82	22	3	318	1689	18.8%

The above table is read: Twelve 12th-grade pupils failed in one subject; three failed in two subjects; one failed in three subjects, etc.

Table II

PUPILS MAKING A GRADE OF "A" IN ONE OR MORE SUBJECTS

Grade	"A" grades made by each pupil One	Two	Three	Four	Total pupils	Pupils in class	Percent
12th	70	22	14	4	113	287	39.3%
11th	55	16	8	6	85	385	22.0%
10th	69	17	11	7	104	435	23.9%
9th	63	22	14	9	109	582	18.5%
Totals	257	77	47	26	411	1689	24.3%

The above table is read: Seventy 12th-grade pupils made a grade of "A" in one subject; twenty-two made a grade of "A" in two subjects; fourteen made a grade of "A" in three subjects, etc.

OTHER STUDIES IN THIS FIELD

High school failures have been studied from many points of view. A very elaborate statistical study[1] of the high school records of failing pupils was made in 1919 by Dr. F. P. Obrien, now with the Bureau of School Service, School of Education, University of Kansas. The remarkable results of a statistical study of such impersonal data as school records, some of them twelve years old, made a lasting impression upon the writer. It was decided immediately that this would be something of a statistical study.

At this point, reference should be made to another statistical study,[2] which, although it did not deal with the question of failures, made an even greater impression upon the writer. This was Dr. Lotus D. Coffman's dissertation for the Ph.D., entitled "Social Composition of the Teaching Population".

Such statistical studies reveal hidden conditions in a truly marvelous manner. The social, economic, and sociological aspects of the present study are the direct results of reading Dr. Coffman's thesis.

1. Obrien, F. P. "The High School Failures" Teachers College, Columbia University Contributions to Education, No. 102. 1919.

2. Coffman, Lotus Delta, "Social Composition of the Teaching Population" , Teachers College, Columbia University Contributions to Education No. 41. 1911.

These two studies gave the writer more ideas and inspiration than all of the other works consulted.

In an early study, Book,[3] in 1904, found what he called school causes to be largely responsible for pupils dropping out of school. School causes were followed closely by economic factors, while individual factors were found to be relatively less important.

In a later study, Johnson,[4] found that there was a marked tendency to eliminate pupils of low class standing in all subjects, during all four years, and with both sexes. He found closer correlation between a pupil's standing in English and elimination, than between elimination and any other high school subject.

Jackson[5] found that pupils and teachers give a wide variety of reasons for failure. These he divided into two groups: personal and institutional. The former group concerned the pupil and the teacher personally, while the latter group dealt with the home and the school.

3. Book, W. F. "Why Pupils Drop out of High School", Pedigogical Seminary, 1904, Vol. XI, Page 204.

4. Johnson, G. R. "Qualitative Elimination in High Schools", School Review, 1910, Vol. XVIII, Page 680.

5. Jackson, F. J. "Causes of Failure in High School" Pennsylvania School Journal, Jan. 1924. Vol. LXXII, No. 5, Page 281.

A study of college failures, by Bond[6], showed mental habits, interests, preparation, mentality, health, personality, and attendance to be factors of importance, and to rank in the order named.

Odell[7] found small correlation between attendance and achievement among high school pupils also.

These and other investigations were studied, not so much to avoid duplicating some one else's work, but, with a view to getting suggestions concerning method and technique. The work undertaken here was a search for local facts, and could not be a duplication since these facts had never been gathered. Other conditions might be similar, and the causes of failure might be the same, in general, but the local facts had to be gathered and tabulated before local conditions could be compared with conditions in any other place.

6. Bond, O. F. "Causes of Failure in Elementary French and Spanish Courses at the College Level" School Review, April, 1924. Page 276.

7. Odell, C. W. "The Effect of Attendance upon School Achievement", Journal of Educational Research, Dec. 1923.

THE DATA

The principal part of this study deals with 742 questionnaires: 542 were filled out by pupils and 200 by the parents or guardians of these pupils. More specifically, 327 questionnaires were filled out by A-pupils, 206 by F-pupils, 136 by the parents of A-pupils, and 55 by the parents or guardians of F-pupils. A small group of pupils failed in one subject while making an "A" in another subject. Nine of these pupils and eight of their parents handed in questionnaires but they showed no considerable contrast with either of the other groups of pupils and were not used.

These questionnaires, (see pages 8 and 9) furnished data concerning the pupil's former schooling, activities, study habits, and health, as well as the social, economic, and sociological background of his home.

A survey of the Phoenix Union High School had been made in October, 1923, under the direction of the United States Bureau of Education. The Chairman of the Survey staff was Dr. E. E. Windes, of the Bureau of Education. He was assisted by Dr. J. B. Sears, of Stanford University, and by Dr. A.O. Neal, of the University of Arizona.

The testing for this survey was done by graduate students of the University of Arizona, Department of Education, under the direction of Dr. C. H. Huffacker, Professor of Educational Psychology at that institution.

This survey was completed a few weeks before the present study was undertaken. From the first, the writer had hoped that the scores made in the standardized tests used in the survey would be available for use in this study. As this was doubtful until a year later, the questionnaires were devised and relied upon to furnish the bulk of the data for this study.

In November, 1924, about 523 achievement scores and 366 intelligence quotients of the pupils included in this study became available. These data are tabulated in Chapter VII.

Copies of both the questionnaires, as finally drawn up, are shown on the next two pages. The originals, copies of which are included in the appendix, were not so crowded for space, as the sheets of paper used were larger than this one.

Table III

PUPIL'S QUESTIONNAIRE

Name _ 6 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _School Number _ _ _

I SCHOOLING

1. Did you go to Kindergarten? _ _Where?_ _ _ _ _ _ _
2. At what age did you enter the first grade? _ _ _ _
3. In the spaces below, write the name of the town or school in which you attended the first twelve grades.

Grade	Town or school	Grade	Town or school
1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

II ACTIVITIES Underline each of the following to which you gave any time during the first semester of this school year. Estimate the number of minutes per week and write this sum after each activity.

Athletics	Debate	Band
Rifle Team	Annual	Orchestra
Class Officer	Coyote Journal	Glee Club
Dramatics	( )	( )
Parties or Movies	Dancing	"Home Work"

III STUDY HABITS Do your parents make you study at home?
Do your parents help you with your difficulties? ____
Have you read the book "How to Study Effectively"? _
Have you studied this little book in any class? ____
How many brothers and sisters,or other children,at home?
Check below ( ) any phrase which seems to describe the conditions under which you study at home.

Alone in the room	With other people in the room
Reasonably quiet place	Noticeably noisy place
At a study table or desk	Sitting in chair without desk

IV HEALTH

Do you wear glasses? _ _Were you ever fitted? _ _ _ _
Does reading tire your eyes? _ _Make your head ache?_
Can you see the blackboard without difficulty? _ _ _
Are you taking physical training? _ _Military? _ _ _
Have you a Doctor's excuse from either of the above?_
Did you spend ALL of last summer in Phoenix? _ _ _ _
If not all the summer, how many weeks did you spend AWAY from Phoenix? _ _ _
How far do you live from school? Give number of:
City blocks ( ) or, if you live in country,miles ( ).
Check the way you usually come to school:
Walk, Streetcar, Bicycle, Auto, Motorcycle,
How many days, this school year, have you missed on account of sickness? _ _ _ _ _

Table IV

REPORT FOR PARENTS AND GUARDIANS

(See next page for Note which appeared here on original)

1. Check your relation to the pupil (Father, Mother, Brother (Sister, Other Relative (Guardian

2. The age of your child, Yrs.__:Months__: Sex__:Grade____

3. What occupation do you wish your child to follow? _____

4. How many hours of the child's time is given to each of the following during the average school day?

Home or Farm duties _ _ _ _ _ _ _ _ Music _ _ _ _ _ _ _ _ _
Work for pay, at home _ _ _:Work for pay, awayfrom home _
(Include work for board, room, lunch, clothes, besides wages)

Home work on lessons _ _; Hours per WEEK at parties, dances, etc.

5. If unable to itemize below, give total spending money _ _
How much cash (not earned above) do you GIVE this child each WEEK for:
Lunch__:School Supplies__:Movies__:Pocket Money____

6. Have you visited the high school this year? _ _ _ _ _
More than once? _ _ _ _ _ _ _

7. How many of the childs teachers (this year) have you met?_

8. What is your occupation? (If a man) _ _ _ _ _ _ _ _ _
(If a woman) _ _ _ _ _ _ _ _ _
9. What is your average yearly income (approximately) _ _

10. What was the approximate amount of taxes paid last year?_

11. If you own or are buying a home, here or elsewhere, check here_

12. If you are living in rented property now, check here_ __

13. If you have a car, check if for business( ), Pleasure( )
14. Does this child have free use of the car?_ _ _ _ Take it to school? _ _ _
15. How many years have you lived in Arizona? _ _ _

16. From what state or country did you come to Arizona? _ _

17. How can the Phoenix Union High School better serve the interests of the pupil here concerned? Feel perfectly free to say exactly what you think. It is very valuable for us to have your point of view, especially since this report is unidentified.

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _
_ _ _ _ _ _ _ _ _ _ _ _ _ _ _
_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

At the top of the parent's questionnaire appeared the following

NOTE

> Do not sign or in any way identify this report. No attempt will be made to identify it. Its chief value lies in this fact. Return it promptly, please, either with the pupil, or, if you prefer, mail it to box 33, Phoenix Union High School, Phoenix, Arizona. Allow us to thank you in advance for your cooperation.

GATHERING THE DATA

From the school records the names of all the "A" and the "F" pupils, together with their school numbers, were secured. The two groups of pupils were listed separately. It was also learned in what study hall they could be found.

Next, each pupil's number was written at the top of one of the questionnaires, which were now kept in files, one for the A-pupils, and another for the F-pupils, in each of the study halls.

The questionnaires for the parents of F-pupils had to be marked in some way so that when they came back through the mail, the writer could separate them from the questionnaires, which the A-pupil's parents were returning. This was done in the mimeographing process. After running off four hundred copies for the parents of the A-pupils, three short cuts were made in the left-hand margin of the stencil with a pen-knife. This caused the next three hundred

copies to have these inconspicuous but identifying marks. As a matter of fact, there was a third group of parents which the writer planned to study separately; those whose children made grades of both "A" and "F". For these parents, questionnaires were marked with two additional cuts of the pen-knife, above the title. All of these marks can be seen on the original questionnaire shown in the appendix.

The next task was to prepare a little bunch of papers to be given to each pupil included in this study. These papers were held together by a paper-clip, and included the following:

1. Pupil's questionnaire, with his school number on it.
2. Note to the pupil, explaining what to do. (See next page)
3. Parents questionnaire, with the proper marking as explained above.
4. Note to parents, explaining the idea.
5. Stamped, addressed envelope, for returning the parent's questionnaire to the writer's mail box at the high school.

On the next page the note to parents and guardians and the note to the pupil are given in full.

TO PARENTS AND GUARDIANS OF P.U.H.S. STUDENTS

The High School is making a careful study of the conditions which seem to affect the quality of the work done by the pupils in school. You may assist very greatly in this study by filling out the accompanying sheet and returning it promptly, either by the pupil or by mail.

Do not sign the sheet. It has certain advantages in respect to freedom and frankness when there is no means of identifying it.

TO THE STUDENT

Both you and your parents, as well as your teachers, are interested in you doing good work in school. At this time a careful study is being made of the factors which seem to affect the quality of school work. To help in this, you are asked to fill out the accompanying sheet very carefully and hand it back in.

A similar sheet has been prepared for your parents to fill out. You are asked, also, to take this other sheet home, and when your parent or guardian has filled it out, to either bring it back to school or see that it is mailed.

With the cooperation of the Principal, and that of the three study-hall Supervisors, the writer was now able to go to each study-hall, each hour of the day, and, calling the A-pupils and the F-pupils by number, give each one present his own bunch of papers. It was explained that it was more or less of a privilege to cooperate in this piece of research, since, the total enrollment of the school being so large, only a random sampling of about seven hundred pupils was to be included.

While the absolute veracity of this last statement may be questioned, it served the purpose of counteracting that feeling that some one was about to measure them in a mysterious and unwelcome manner. From the pupils who came forward to receive papers, the other pupils noticed that both good, and fair, as well as poor pupils were included in the study.

In a few minutes, the novelty of the procedure had worn off and those not filling questionnaires were busy with their work again. As soon as a pupil had filled his questionnaire, it was taken up. At the close of the period all were reminded of the importance of taking the parent's questionnaires home and getting them back again.

This part of the work was a matter of asking for something, which the pupils might give or refrain from giving, according to the way they felt about it. Considerable attention was given to the matter of getting them to feel right about it, as well as to make it easy for them to do what was wanted. The cooperation secured from both pupils and parents amply repaid the efforts that were made.

A check-up showed that many pupils, especially F-pupils had not been reached, either because of absence, or because they had no study-hall.

Permission was next obtained from the Principal to reach the remaining pupils through their English classes. Every pupil in the high school is enrolled in one or more English classes. Questionnaires bearing the school number of each A-pupil and of each F-pupil in every English class were given to the English teachers, who were asked to have them filled out and returned, as had been done in the study halls earlier in the same week. Each of these pupils was also given a parent's questionnaire, note to parents, and stamped envelope to take home. The number of questionnaires returned is shown in the tables below.

Table V

PUPIL'S QUESTIONNAIRES RETURNED

Group	Returned	Pupils who Left School	Pupils Unaccounted for	Total
A-pupils				
Cases	327	37	28	392
Percent	92	9.4	7.2	
F-pupils	206	80	13	299
Cases				
Percent	94	27.7	4.5	
Both-F-and-A-pupils				
Cases	9	4	6	19
Percent	60	21	31	
Totals	542	121	46	710
Percent	92	17	6.7	

Table VI

PARENT'S QUESTIONNAIRES RETURNED

Group	Number Sent out	Number Returned	Percent Returned
A-parents	327	136	42.1%
F-parents	206	56	26.6%
Both-F-and-A-parents	9	8	88.8%
Totals	542	200	36.7

Over 90% of each group of pupils, who were still in school when these data were gathered, filled out questionnaires. Special efforts were made to secure as many of the F-pupils as possible. There were fewer of them, and they were harder to locate, due to irregular schedules, absence, and perhaps to other reasons. Ninety-four percent were obtained.

Since a 50% return on questionnaires which are mailed is regarded as a good return, the returns obtained from the parents here are regarded as satistactory.

METHOD OF HANDLING THE DATA

The general method of comparing the two groups of pupils in this study was to determine the percent of each group reporting a certain activity or state of affairs and then compare these percents.

It was soon discovered that, when the whole of one group was compared with the other group, as a whole, little contrast would be shown.

The A-pupils were then separated into two parts: the Multiple-A group, including those pupils who made a grade of "A" in two or more subjects, and the One-A group, which included those pupils who made a grade of "A" in only one subject. This distinction indicates a real difference in scholarship.

Similarly, the F-pupils were divided into a Multiple-F group and a One-F group. These two groups also differed markedly in scholarship.

These four groups could now be arranged in descending order of scholarship, as follows,

Multiple-A Pupils	One-A Pupils	One-F Pupils	Multiple-F Pupils

When the percents of the above four groups taking part in any activity were arranged in this manner, there was nearly always a contrast between the extreme scholarship groups, which could not be seen before the marginal one-A and one-F pupils had been taken out.

The reasoning here is that, if any factor, say distance from school, should be closely related to scholarship, then, this factor should vary as the quality of scholarship varies. This variation might be

either direct or inverse, depending upon the nature of its relationship to the quality of scholarship. For example, the number of hours per week of home work on lessons would normally be expected to vary directly with the quality of scholarship. The number of hours per week of work for pay away from home, would normally be expected to bear an inverse relationship to the quality of a pupil's scholarship.

Chapter II

SCHOOLING

The first section of the pupil's questionnaire deals with his former schooling. The returns from this part of the questionnaire are tabulated and summarized in the following chapter.

When the two groups of pupils were compared as to the percent of each attending Kindergarten, the following data were obtained.

Table VII

PUPILS ATTENDING KINDERGARTEN

	A-pupils	F-pupils
Percent	32.0	30.0
Number of cases	105/328	58/193

These data do not show much of a contrast between the two groups of pupils we are comparing. About one-third of each group had the advantage of Kindergarten training.

If, however, the marginal pupils, i.e. those with only one A or one F, are eliminated and the study confined to those pupils who made two or more A's in the one case, or two or more F's in the other, the following percents are found.

	Multiple-A pupils	Multiple-F pupils
Percent	38.7	25.7
Number of cases	50/129	18/70

These data show greater contrast between the more successful and the more definitely failing pupils. In this case the tendency for A-pupils to have, and for F-pupils to lack, the advantages of Kindergarten training is clearly shown. This suggests a certain degree of relationship between good scholarship and Kindergarten attendance.

Table VIII

AGE WHEN ENTERING THE FIRST GRADE

ALL A-PUPILS				ALL F-PUPILS	
AGE	CASES	PERCENT	PERCENT	CASES	AGE
5 Years	29	9.6	11.9	23	5 Years
6 "	153	51.0	48.4	93	6 "
7 "	94	31.3	30.5	59	7 "
8 "	20	6.6	6.7	13	8 "
9 or over	4	1.3	2.0	4	9 or over
Totals	300			192	

Below, the same data are grouped to show the percent of each group entering the first grade above and below the normal age of six years.

Age	A-pupils	F-pupils
5 or 6 Years	60.6%	60.3%
Over age 6 years	39.2%	39.2%

The above comparisons show that the two groups are almost exactly alike in respect to age when entering the first grade. Handling the data in this way does not bring out some real differences, as will now be shown.

When the marginal one-A and one-F pupils are disregarded, and the extreme groups of multiple-A and multiple-F pupils are compared, they show greater contrast. This is shown in the next table.

Table IX

AGE WHEN ENTERING THE FIRST GRADE

Multiple-A Pupils				Multiple-F Pupils		
Age	Cases	Percent	: Percent	Cases	Age
5 Years	14	11.7	: 19.3	12	5 Years
6 "	59	49.5	: 35.4	22	6 "
7 "	34	28.5	: 33.8	21	7 "
8 "	12	10.0	: 6.4	4	8 "
9 or over	0	0.	: 4.8	3	9 Or over
Totals	119			62	

Grouping the above data with the normal age of six years as the dividing point, we have:

	A-pupils	F-pupils
Age 5 or 6 years . .	61.2% . . .	54.7%
Over age six . . .	38.5% . . .	45.0%

At this point the two groups of pupils show a small but interesting difference. The quality or characteristic we are trying to measure, i.e. scholarship, varies continuously and consistently as we pass from the extremely good pupils through the marginal cases to the very poor pupils in the other group. The above data indicate a tendency for early entrance to the first grade to increase among the better pupils.

While this contrast may not impress the reader as being very important, in itself, as this study progresses, the cummulative effect of many small differences may help to account for the fact that one group of pupils

was doing excellent work while the other group was failing.

AGE-GRADE DISTRIBUTION

Data from another source tend to corroborate the suggestion that the failing pupils get a later start in school. Answers to question two, on the parent's questionnaire give the following comparison. There were fifty-four returns from the parents of F-pupils, all of which are tabulated. For the purpose of comparison, an equal number of cases were taken at random from the returns of the parents of A-pupils.

Table X

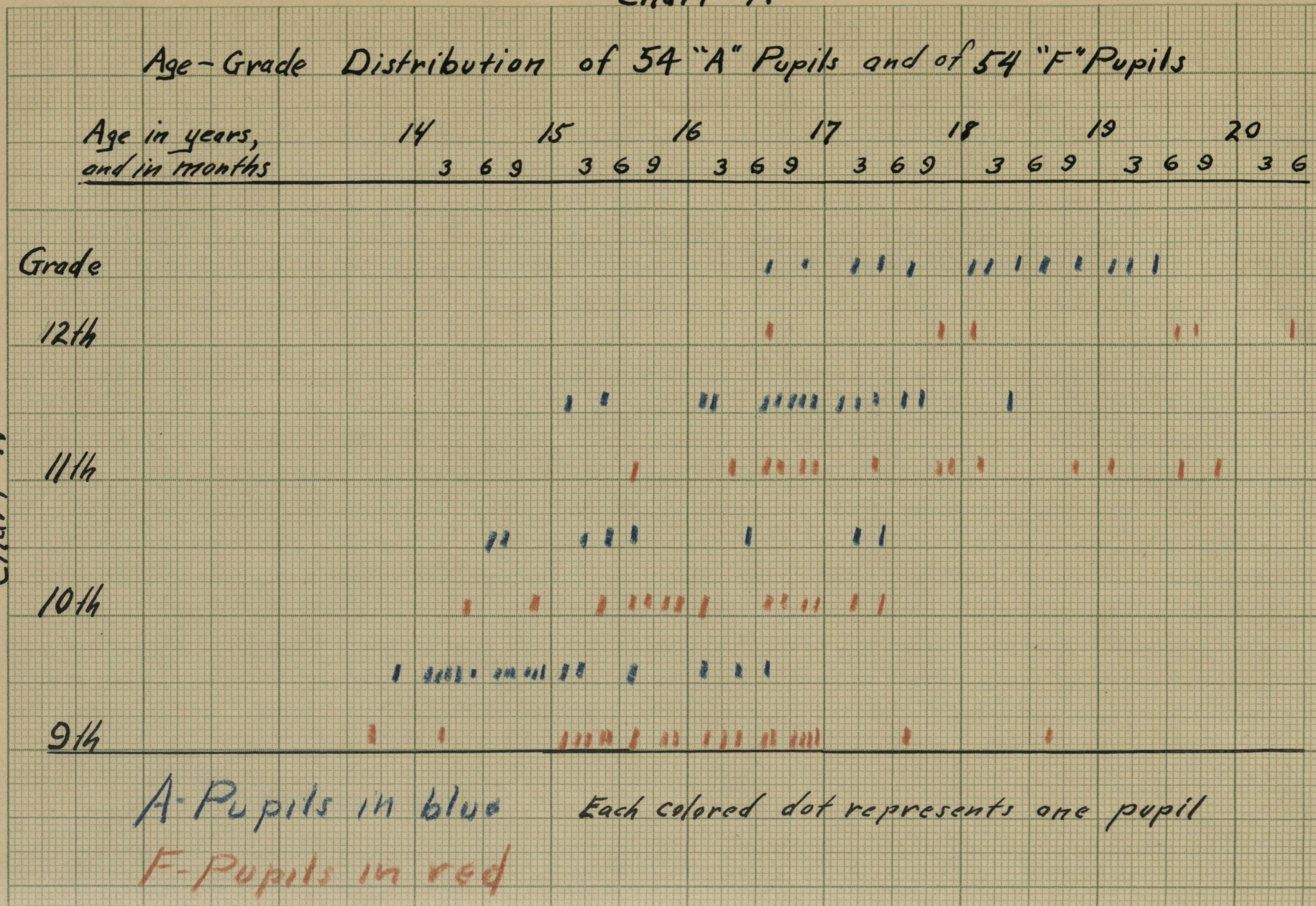
COMPARISON OF MEDIAN AGES

	9th Grade	10th Grade	11th Grade	12th Grade
F-Pupils				
Years, and Months	16 0	15 9	17 6	18 9
A-Pupils				
Years, and Months	14 9	15 6	16 9	18 0
Over-age of F-Pupils	15 Mo.	3 Mo.	9 Mo.	9 Mo.

The number of cases in the above table is shown below.

Grade	9th	10th	11th	12th
F-Pupils	20	14	14	6
A-Pupils	18	8	15	13
Totals	38	22	29	19

Chart-A


Age-Grade Distribution of 54 "A" Pupils and of 54 "F" Pupils
Age in years, and in months
14 15 16 17 18 19 20
3 6 9 3 6 9 3 6 9 3 6 9 3 6 9 3 6 9 3 6
Grade
12th
11th
10th
9th
Chart-A
A-Pupils in blue
F-Pupils in red
Each colored dot represents one pupil

CHANGES IN SCHOOL SYSTEMS

Phoenix is both a health and a winter resort. As a result, there is a great deal of moving on the part of families and many changes in school systems for the children. It was thought that this might be a factor in school success, and that a study of it might throw some light upon the problem of school failures. These data were obtained from answers to question three on the pupil's questionnaire. The local unit includes all of the union high school districts. Attendance at any other place, even the nearest town, was considered the basis for counting a change in school systems. A pupil who began school in Phoenix, moved away to a new system, and back again to Phoenix, was credited with two changes.

It will be noted that the number of changes is not the same as the number of school systems in which the child has worked, but is usually one less.

Table XI

CHANGES IN SCHOOL SYSTEMS

Group	Number of changes 0	1	2	3	4	(Over 4)	Total
Multiple-A	41	32	20	18	12	6	129
One-A	73	56	27	21	17	7	201
One-F	43	30	23	22	5	12	135
Multiple-F	31	17	4	5	4	3	64
Total cases	188	135	74	66	38	28	529
Percents	35.5	25.5	14.0	12.4	7.1	5.3	

The above table is read: 188 pupils, or 35.5% reported no changes in school systems; 135 pupils or

25.5% have changed once; 74 pupils, or 14% have changed twice, etc. The last table gives one the gross facts concerning the entire group of 529 pupils who reported on this question. Arranged in another way, the above data tell one that-

35.5% have never changed school systems
64.3% have changed systems one or more times
39.0% " " " two " " "
25.0% " " " three " " "
13.4% " " " four " " "
5.3% " " " five " " "

The above data deal with one mixed group including both A and F-pupils. It will be interesting, next, to see how the amount of changing varies among the four scholarship groups, i. e.

The very good group, called Multiple-A
The marginal good group, called One-A
The marginal poor group, called One-F
The very poor group, called Multiple-F

If changing school systems is a factor in the scholarship of these pupils, then the amount of changing should vary continuously and consistently as one passes through the distinct scholarship groups above. Certainly there should be a contrast between

the extreme groups. The facts are shown in tabulated form in the next table.

Table XII

CHANGES IN SCHOOL SYSTEMS BY PERCENTS

Group	Number of changes 0	1	2	3	4	(Over 4)	Total Cases
Multiple-A	31.8	24.8	15.5	13.9	9.3	4.6	129
All-A	34.5	26.6	14.2	11.8	8,7	3.9	330
One-A	36.3	27.8	13.4	10.4	8.4	3.4	201
One-F	31.8	22.2	17.0	16.3	3.7	8.8	135
All-F	37.1	23.6	13.5	13.5	4.5	7.5	199
Multiple-F	48.4	26.5	6.2	7.8	6.2	4.6	64

The above table should be read: Of the Multiple-A pupils, 31.8% have never changed systems, 24.8% have changed school systems once, 15.5% have changed twice, etc. When all of the A-pupils are combined into one group, and all of the F-pupils into another group, and these two groups are inserted into the above table, as they have been in red ink, there are actually six scholarship groups arranged in descending order. This mixing of the extremes with the marginal cases produces a third group, the quality of whose scholarship is different than that of either of the first two groups.

The above table shows that nearly half of the Multiple-F pupils are from the local district, while only about one-third of the Multiple-A pupils are local.

These two facts might lead to the hasty conclusion that the local school system was inferior in its standards. As a matter of fact, the scores made by the local children in the standardized tests used in the survey are a little above the average. These tests included the Stanford Achievement Test for 9th grade pupils and the Iowa Entrance Examination for 12th grade pupils. These seniors took this test in October, and made better than average scores, in spite of the fact that they were tested at a time nearer the beginning, than the end, of their last year in high school.

One must look farther for the facts. The writer's explanation of the above data, is, that the process of changing school systems has a tendency to eliminate the weaker students. Only the stronger ones survive. For them, moving from place to place is not a fatal handicap. They overcome it. In the local school population, however, the poor students keep on coming to school because there is nothing else for them to do. If they don't make the elementary grades in eight years, pure inertia keeps them there for nine or ten. To the personal knowledge of many teachers, this state of affairs is also true in high schools. Many succeed in graduating with the aid of

summer school or even of a fifth year in high school.

The table below has the same facts arranged to present another point of view.

Table XIII

CHANGES IN SCHOOL SYSTEMS BY PERCENTS

Group	Number of changes 0	1	2	3	4	(Over 4)	Total Cases
Multiple-A	21.8	23.7	27.0	27.2	31.5	21.4	129
All-A	60.7	65.1	63.4	59.0	76.2	46.4	330
One-A	38.9	41.4	36.4	31.8	44.7	25.0	201
One-F	22.8	22.2	31.0	33.3	13.1	42.8	135
All-F	39.2	34.9	36.4	40.8	23.6	53.5	199
Multiple-F	16.5	12.5	5.4	7.5	10.5	10.7	64
Number of cases	188	135	74	66	38	28	529

The above table is read: of the 188 pupils who have never changed school systems, 21.8% are in the Multiple-A group, (in red) 60.7% are in the A-group, 38.9% are in the One-A group, 22.8% are in the one-F group, etc. Similarly for pupils who reported one or more changes in school systems.

This table, like the one before it, shows that the local pupils have a smaller percent of their number in the higher scholarship groups, and a correspondingly larger percent in the lower scholarship groups.

However, the suggestion of inferiority is not supported by the findings of the high school survey.

The following data, taken from the parent's questionnaire, item number 15, throw some light upon the question of how much scholarship is affected by moving.

Table XIV

NUMBER OF YEARS IN ARIZONA

Years	Parents of A-pupils	Parents of F-pupils
1 to 5	29.7%	24.5%
6 to 10	22.3%	14.0%
11 to 15	12.7%	31.5%
16 to 20	14.3%	10.5%
21 to 30	12.7%	7.0%
31 to 40	6.0%	8.7%
Over 40	3.0%	3.5%
Total cases	139	57

Measures of central tendency

	A-parents	F-parents
Q-1	5 years	5 years
Median	10 "	13 "
Mean	13.6 "	15.6 "
Q-3	20 "	19 "

The above data may be grouped in another manner,

Years	A-parents	F-parents
5 years or less	29.7%	24.5%
Over five years	70.3%	75.5%
Over ten years	48.0%	61.5%
Over 15 years	35.3%	30.0%
Over 20 years	21.9%	19.5%
Over 30 years	9.2%	10.8%
Over 40 years	3.0%	3.5%

Parents who have lived in Arizona for ten years or over, have done little moving since their

children started to school. These data, however, do not take account of the number of times families have moved from one place to another within the state.

On the other hand, parents who have lived in Arizona for less than ten years, and who have children in the high school, are pretty certain to have moved to Arizona since their children entered school.

These data do not prove anything; they merely tend to supplement the suggestion, gathered from other data, that the higher scholarship groups include a higher percent of pupils from families that have moved during the child's school career.

SUMMARY OF CHAPTER II

(In all summaries of chapters, and in the final conclusion, only the Multiple-A group and the Multiple-F group are contrasted.)

Thirty-eight percent of the A-pupils and 25% of the F-pupils reported Kindergarten training.

Sixty-one percent of the A-pupils and 54% of the F-pupils entered the first grade at the normal age of six years or younger.

At the time these data were obtained the median F-pupil was nine months older than the median A-pupil in the same grade.

Pupils who have never changed school systems, i.e. have always been in the local system, furnish 32% of the Multiple-A pupils and 48% of the Multiple-F pupils.

Chapter III

ACTIVITIES

The second section of the pupil's questionnaire deals with his activities. The returns from this part of the questionnaire are tabulated and summarized in the following chapter.

Item number 4 on the parent's questionnaire also deals with the pupil's activities. These data are tabulated and summarized in the latter part of this chapter.

Table XV

PERCENT OF EACH GROUP TAKING PART IN SCHOOL ACTIVITIES

Group	Multiple-A		One-A		One-F		Multiple-F	
Activity	Cases	%	Cases	%	Cases	%	Cases	%
LITERARY Dramatics Debate Annual School paper	32	24.5	32	16.0	5	3.7	2	3.1
CLASS OFFICER	11	8.5	10	5.0	2	1.5	0	0.
"HOME WORK" (on lessons)	114	88.3	158	79.0	101	74.9	44	70.0
ATHLETICS Girls Boys Rifle Team	43	33.3	81	40.5	42	31.1	20	31.7
AMUSEMENTS Parties Movies Dancing	84	65.1	142	71.0	80	59.2	28	44.4
MUSIC Band Orchestra Glee Clubs	23	17.8	19	9.5	10	7.5	6	9.5
MISCELLANEOUS	6	4.6	3	1.5	0	0.	0	0.
BLANK	5	3.8	16	8.0	20	14.9	10	15.9
	Multiple-A		One-A		One-F		Multiple-F	
Total cases	129		200		135		63	(527)

The above table is read: Of the Multiple-A pupils, 24.8% took part insome literary activity; 8.5% were class officers; 88.3% reported "home work" on lessons; 33.3% took part in athletics, etc. Similarly, of the One-A pupils, 16% took part in some literary activity; 5.0% were class officers, etc.

Table XVI

PERCENT OF EACH GROUP TAKING PART IN SCHOOL ACTIVITIES

Group	Multiple-A	One-A	One-F	Multiple-F
Activity	Percents			
LITERARY	45.1	45.1	7.0	2.8
CLASS OFFICER	47.8	43.5	8.7	0.
"HOME WORK"	27.3	38.0	24.2	10.5
ATHLETICS	23.1	43.7	22.5	10.7
AMUSEMENTS	25.1	42.6	23.9	8.4
MUSIC	39.8	32.7	17.2	10.3
MISCELLANEOUS	66.6	33.3	0.	0.
BLANK	9.8	31.3	39.3	19.
Group percents	24.4	38.1	25.6	11.9

The above table is read: Of all the pupils reporting literary activities, 45.1% were from the Multiple-A group; 45.1% from the One-A group; 7% from the One-F group and 2.8% from the Multiple-F group. Similarly, for each of the other activities.

The comparison of the four groups of pupils in the two tables above, indicates that the better pupils take part in these school activities more freely than the poorer pupils. Both tables indicate that they give more time to amusements also. Participation in parties, dances, and movies may depend upon the economic background of the family. It is also true that,

in many of the wealthier families, the parents insist upon "home work" in the evenings and amusements only on week-ends.

Three-fourths of those who play in the band or orchestra, or sing in the glee clubs, are A-pupils. Here again, the economic factor may be the deciding one. Singing lessons and band instruments are expensive, and leisure time for practice depends somewhat upon the income of the family.

The class officers, whom the pupils elect, come almost exclusively from the A-group. The two exceptions were popular athletes.

Good grades in English are required of all who work upon the staff of the school paper. This may explain why 90% of those reporting literary activities are A-pupils.

These data were gathered before supervised study was introduced. Home work on lessons is reported by 27% of the A-pupils and by 10% of the F-pupils.

Activities do not seem to be to blame for poor work in school. It may be that the A-pupils have more energy and drive than their less scholarly classmates. The economic status of the families concerned, undoubtedly, affects the pupil's participation in activities.

Item number 4 of the parent's questionnaire gives some additional data on the subject of student activities. These data are tabulated below.

Table XVII

HOME WORK ON LESSONS

Hours per day	A-Pupils	F-Pupils
0.1 to 0.9	7	3
1.0 " 1.9	24	10
2.0 " 2.9	36	9
3.0 " 3.9	17	2
4.0 " 4.9	7	1
5.0 " 5.9	9	1
6 or over	23	9
Totals	123	35

Measures of central tendency

	A-pupils	F-pupils
Q-1	1.9 Hrs.	1.5 Hrs.
Median	2.8 "	2.5 "
Mean	2.5 "	2.1 "
Q-3	5.9 "	6.0 "

The large number of cases reporting six or more hours of home work per day needs some explanation. One can see that the item "hours per WEEK", on the parent's questionnaire, follows so closely after the space where " home work on lessons" was to be recorded, that many undoubtedly recorded the hours per week, instead of the number of hours per day. For this reason, in computing the mean, these answers were arbitrarily counted as two hours per day.

Table XVIII

HOURS PER DAY ON HOME OR FARM DUTIES

Hours per day	A-Pupils	F-Pupils
0.1 to 0.9	19	6
1.0 " 1.9	28	12
2.0 " 2.9	30	13
3.0 " 3.9	4	1
4.0 " 4.9	5	1
5 or over	0	1
Totals	86	34

Measures of central tendency

	A-Pupils	F-Pupils
Q-1	1.3 Hrs.	1.0 Hrs.
Median	1.8 "	1.7 "
Mean	1.8 "	1.8 "
Q-3	2.6 "	2.3 "

	A-Pupils	F-Pupils
Percent who work	64.6	74.6
Percent who do not work	20.5	5.4
Blank questionnaires	14.9	20.0
Miscellaneous answers	5	7

In computing the mean, miscellaneous answers such as, "yes", "a few", "as necessary" etc. were arbitrarily counted as one hour per day. In this case again, the parents of A-pupils were more careful in filling out the reports, judging from the number of blank questionnaires.

It is clear that a larger percent of the F-pupils have home or farm duties. But in regard to the amount of work per person who does work, there is little difference between A and F-pupils. These data are similar to those on the subject of parties and

dances; while a larger percent of the A-pupils participate in these amusements, the actual participants of both groups spend about equal amounts of time at it.

Table XIX

WORK FOR PAY, AT HOME

ANSWER	A-Pupils	F-Pupils
Yes	8.7%	8.6%
No	57.8%	50.0%
Blank reports	33.5%	40.4%
Quantitative reports	12	5
Total cases	140	54

Table XX

WORK FOR PAY, AWAY FROM HOME

ANSWER	A-Pupils	F-Pupils
Yes	15.6%	34.0%
No	47.1%	37.5%
Blank reports	37.3%	28.5%
Quantitative reports	12	3
Total cases	142	56

While quantitative answers were asked for, they were given in such small numbers that a quantitative comparison was impossible.

The first table, above, shows the two groups of pupils to be working for pay, at home, in about equal percentages. This would be expected because of the equality shown in the table, "Hours per day on Home or Farm Duties", on page 33.

In the more definitely economic matter of work for pay, away from home, the two groups show a marked differance. This is twice as common among the F-Pupils as it is among the the A-pupils.

Table XXI

HOURS PER WEEK SPENT AT PARTIES AND DANCES

Hours per week	A-Pupils	F-Pupils
0.1 to 0.9	4	0
1.0 " 1.9	6	2
2.0 " 2.9	11	2
3.0 " 3.9	19	5
4.0 " 4.9	7	3
5.0 " 5.9	3	3
6.0 " 7.9	6	0
8.0 " 9.9	5	0
10 or over	1	1
Total cases	62	16

Measures of central tendency

	A-Pupils	F-Pupils
Q-1	2.0 Hrs.	2.0 Hrs.
Median	3.3 "	3.5 "
Mean	3.6 "	3.6 "
Q-3	4.6 "	5.0 "

	A-Pupils	F-Pupils
Percent who participate	48.7	34.6
Percent not participating	28.8	40.0
Blank questionnaires	22.5	25.4
Miscellaneous answers	7	3

The miscellaneous answers were "few", "seldom", etc. In computing the mean they were arbitrarily given the weight of one hour per week.

From these data, it appears that a somewhat larger percent of the A-pupils attend parties and dances. The members of both groups, who do attend these affairs, spend about equal amounts of time per week on them, i.e. three and one half hours. A possible explanation of this equality is, that members of both groups run together

and attend the same functions throughout the school year. To the extent that the pupils do this, the amounts of time spent by both groups will tend to be the same.

Table XXII

HOURS PER DAY SPENT ON MUSIC

Hours per day	A-Pupils	F-Pupils
0.1 to 0.9	12	2
1.0 " 1.9	33	8
2.0 " 2.9	4	5
3.0 " 3.9	1	0
Total cases	50	15

	A-Pupils	F-Pupils
Percent reporting music	38.2	29.2
Percent reporting no music	21.8	34.5
Blank questionnaires	40.0	36.3
Miscellaneous answers	4	1

Measures of central tendency

	A-Pupils	F-Pupils
Q-1	1.0 Hrs.	1.1 Hrs.
Median	1.6 "	1.6 "
Mean	1.3 "	1.6 "
Q-3	1.9 "	1.9 "

Miscellaneous reports were not quantitative but all indicated some time given to music; examples, "yes", "spare time", "desultory practicing", "as much as she wants to", and "two lessons a week". In computing the mean they were each counted, arbitrarily, as one hour per day.

A comparison of the two groups of pupils at this point shows that more members of the A-group give

time to music, although the members of both groups, who participate, spend approximately equal amounts of time upon music. These are rough measures of perhaps rougher estimates, but as far as they are accurate, they indicate equality, and that serves the purpose of this inquiry.

SUMMARY OF CHAPTER III

Part 1, Based upon the pupil's questionnaires.

The A-pupils report participation in school activities, amusements, and music more frequently than do the F-pupils.

The A-pupils also report more time given to home work on lessons.

In athletics, the most active pupils are the marginal ones who made one "A".

Class offices are practically monopolized by the A-pupils, with Multiple-A pupils holding the larger part of them.

While the percents of A-pupils and of F-pupils who participate in different activities vary, those pupils who actually participate in a given activity, say dancing, report approximately equal amounts of time spent upon that activity. In the case of dancing, the time spent was reported as three and one-half hours per week

The economic status of the family from which the pupil comes, undoubtedly affects his participation in activities, especially music.

SUMMARY OF CHAPTER III, continued

Part 2, Based upon the parent's questionnaires.

Parents of A-pupils report slightly greater amounts of time spent upon lessons at home.

Home or Farm duties are reported more frequently by the parents of F-pupils, although the amounts of time actually given to these duties by the pupils of both groups, who do work, tend to be equal. For example, 75% of the F-pupils, and 65% of the A-pupils have home or farm dities, but the median amount of time reported in each group is 1.8 hours per day.

Work for pay, at home, is reported by about 9% of the parents in each group.

Work for pay, away from home, is reported by the parents of 34% of the F-pupils and by 15% of the parents of A-pupils.

Participation in parties and dances is reported by the parents of 49% of the A-pupils, and by the parents of 35% of the F-pupils. Participants, in both groups, reported about 3 1/2 hours per week spent in this activity.

Chapter IV

STUDY HABITS

The third section of the pupil's questionnaire deals with his study habits. The returns from this part of the questionnaire are tabulated and summarized in the following chapter.

Table XXIII

DO PARENTS MAKE YOU STUDY?

Group	Multiple-A	One-A	One-F	Multiple-F
Answer	Number of cases			
Yes	50	102	82	38
No	74	93	47	20
Blank	5	7	7	5
Totals	129	202	136	63

THE ABOVE DATA, BY PERCENTS

Answer	Multiple-A	One-A	One-F	Multiple-F
Yes	38.6	50.5	60.4	60.3
No	57.6	45.7	34.5	31.8
Blank	3.9	3.5	5.1	7.9

It appears, from the above data, that the parents of F-pupils are more inclined to make their children study at home. In many cases where A-pupils answered this question "No", they qualified it with the statement, " I study without them making me do it". This type of answer may furnish the key to the situation. It may be that the parents take a hand, only when there is some danger of their children failing. The parents of these pupils are busy people, who, as long as things go smoothly, pay little attention to school affairs.

Table XXIV

DO PARENTS HELP YOU WITH YOUR DIFFICULTIES?

Number of cases

Answer	Multiple-A	One-A	One-F	Multiple-F
Yes	80	120	83	37
No	44	74	42	23
Blank	4	7	9	3

THE ABOVE DATA, BY PERCENTS

Answer	Multiple-A	One-A	One-F	Multiple-F
Yes	62.6	59.7	62.0	58.8
No	34.3	36.8	31.3	36.3
Blank	3.1	3.5	6.7	4.7

From the above data, it appears that there is not much difference in the matter of parent's willingness to help the pupils with their difficulties.

In many cases the answers indicated limitations to the parent's ability to help the pupil in certain high school subjects. Data on the extent of the parent's education would be interesting at this point if they were available. The questionnaire was really too long without this additional item.

Table XXV

HAVE YOU READ WHIPPLE'S BOOK, "HOW TO STUDY EFFECTIVELY"?

Answer	Number of cases Multiple-A	One-A	One-F	Multiple-F
Yes	80	115	53	32
No	48	79	79	27
Blank	1	6	3	4
Totals	129	200	135	63

THE ABOVE DATA, BY PERCENTS

	Multiple-A	One-A	One-F	Multiple-F
Yes	62.0	57.5	39.2	50.9
No	37.3	39.5	58.6	42.8
Blank	0.7	3.0	2.2	6.3

One hundred copies of this book were in the school library. Some teachers used a few periods to explain the book to their pupils. The above data show some contrast between the two groups, indicating greater use of the book on the part of the better pupils.

A closer examination of the returns shows that there is quite a contrast between the number in each grade who have read this book. See the table below.

Table XXVI

PERCENT WHO HAVE USED WHIPPLE'S BOOK, BY CLASSES

Class	Multiple-A	One-A	One-F	Multiple-F	Average
12th Grade	81.0	84.1	75.0	100.	82.8
11th "	83.3	70.0	56.0	60.	68.6
10th "	40.6	21.2	33.3	52.1	34.7
9th "	47.2	48.0	31.6	40.7	41.0
Average	62.0	57.5	39.2	50.8	

Table XXVII

NUMBER OF OTHER CHILDREN AT HOME

Group	Multiple-A	One-A	One-F	Multiple-F
Number	Percents			
None	18.1	15.5	15.4	14.8
1	29.1	26.8	24.3	25.9
2	30.7	21.5	28.4	24.0
3	11.0	16.6	10.5	16.6
4	4.7	5.9	6.5	5.5
5 to 9	3.1	8.0	13.8	11.1
Blanks	1.5%	7.5%	9.7%	16.6%
Number of cases	127	186	123	54

The above table is read: Of the Multiple-A pupils, 18.1% reported no other children a t home; 29.1% reported one other child a t home; 30.7% reported two other children, etc. Similarly, for the One-A pupils, 15.5% reported no other children, etc.

Arranged in another way, the above data show a little more contrast between the scholarship groups.

Number	Multiple-A	One-A	One-F	Multiple-F
None	18.1%	15.5%	15.4%	14.8%
One or more	81.9	84.5	84.6	85.2
Two or more	49.5	52.0	59.2	57.2
Three or more	18.8	30.5	30.8	33.2
Four or more	7.8	13.9	20.3	16.6
Five or more	3.1	8.0	13.8	11.1

The above table is read: Of the Multiple-A pupils, 18.1% report no other children at home; 81.9% report one or more children; 49.5% report two or more, and so on through the other numbers of children up to nine. Similarly, for the One-A pupils, 15.5% report no other children at home; 84.5% report one or more children etc.

While there is not much difference, the last two tables show a slight tendency for the A-pupils to come from smaller, and the F-pupils from larger, families. The ability ofpupil to study at home depends, to some extent, at least, upon the other children there. The next table deals with conditions of home study.

Table XXVIII

HOME STUDY CONDITIONS

Condition	Multiple-A	One-A	One-F	Multiple-F	
	Number of cases				
Alone in room	41	52	30	25	
Quiet place	75	121	77	29	
Desk or table	84	115	76	36	
Others in room	53	83	62	19	
Noisy place	3	4	14	11	
Without desk	19	23	17	9	
Totals	129	200	135	63	(527)

THE ABOVE DATA, BY PERCENTS

Condition	Multiple-A	One-A	One-F	Multiple-F
	Percents			
Alone in room	31.8	26.0	22.2	39.6
Quiet place	58.1	60.5	57.0	46.0
Desk or table	65.1	57.5	56.2	57.1
Others in room	41.0	41.5	45.9	30.1
Noisy place	2.3	2.0	10.3	17.4
Without desk	14.7	11.5	12.5	14.2

The above table is read: Forty-one Multiple-A pupils, or 31.8%, reported that they studied alone in the room; seventy-five or 58.1% reported a quiet place to study, etc. Similarly, Fifty-two One-A pupils, or 26%, reported that they studied alone in the room; one hundred twenty-one, or 60.5% reported a quiet place etc.

When two contradictory conditions were reported on the same questionnaire, for example, both a quiet and a noisy place to study, only the more favorable condition was taken into consideration. There was no way of weighting these contradictory answers.

Fewer of the F-pupils reported a quiet place to study. Fewer of the F-pupils reported the use of a study desk or table. More of the F-pupils reported a noisy place to study. Aparently the other people in the room are not noisy, because the A-pupils reported other people in the room more frequently than did the F-pupils. In some cases, other people in the room, might mean that they were helping the pupil with his studies.

SUMMARY OF CHAPTER IV

Sixty percent of the F-pupils and 39% of the A-pupils report that their parents make them study at home.

Sixty-two percent of the A-pupils and 59% of the F-pupils reported that their parents, as far as they were able, helped them with their difficulties.

Sixty-two percent of the A-pupils and 51% of the F-pupils reported that they had read Whipple's book, "How to Study Effectively". Reading this book was found to be about twice as common among the 11th and

12th grade pupils as among pupils of the 9th and 10th grades. Eighty-two percent of the former and 43% of the latter reported reading this book.

The A-pupils tend to come from smaller, and the F-pupils from larger families.

A quiet place to study was reported by 58% of the A-pupils and by 46% of the F-pupils.

A noisy place to study was reported by 2.3% of the A-pupils and by 17.4% of the F-pupils.

A study table or desk was reported by 65% of the A-pupils and by 57% of the F-pupils.

Studying without a desk or table was reported by about 14% of each group.

Studying alone in a room is reported by 32% of the A-pupils and by 40% of the F-pupils.

Studying with others in the room was reported by 41% of the A-pupils and by 30% of the F-pupils.

Chapter V

HEALTH

The fourth and last section of the pupil's questionnaire deals with his health. The returns from this part of the questionnaire are tabulated and summarized in the following chapter.

Table XXIX

NUMBER REPORTING VISUAL IRREGULARITIES

Condition	Number of cases Multiple-A	One-A	One-F	Multiple-F
TIRED EYES				
Yes	24	39	45	17
No	103	159	88	45
Blank	2	3	2	1
HEADACHE				
Yes	20	41	28	10
No	108	156	105	50
Blank	1	4	2	3
SEE BLACKBOARD				
Yes	117	192	124	57
No	8	5	5	6
Blank	4	4	5	0

THE ABOVE DATA, BY PERCENTS

	Multiple-A	One-A	One-F	Multiple-F
TIRED EYES				
Yes	18.6	19.5	33.3	26.9
No	79.8	79.0	65.0	71.4
Blank	1.6	1.5	1.6	1.7
HEADACHE				
Yes	15.5	20.5	20.7	15.8
No	83.7	87.5	77.7	79.0
Blank	0.8	2.0	1.6	4.7
SEE BLACKBOARD				
Yes	90.6	95.5	91.0	90.4
No	6.2	2.5	4.4	9.5
Blank	3.2	2.0	4.4	0.0

Eye strain seems to be more common among the F-pupils. Headache is reported by about 15% in each group. About 90% in each group report ability to see the blackboard.

Difficulty in seeing the blackboard is reported by9.5% of the F-pupils and by 6.2% of the A-pupils.

Table XXX

PERCENT FITTED FOR, AND WEARING, GLASSES

	Number of cases Multiple-A	One-A	One-F	Multiple-A
Fitted for Glasses	22	34	19	14
Wearing Glasses	9	11	3	6

THE ABOVE DATA, BY PERCENTS

	Multiple-A	One-A	One-F	Multiple-F	
Fitted for Glasses	17.6	16.9	14.6	23.0	(Av. 17.2)
Wearing Glasses	6.9	5.4	2.9	9.5	(Av. 5.6)

The above data show some difference between the extreme groups. The Multiple-F group shows a higher percentage fitted for, and wearing glasses. The table below shows some interesting contrasts when these same pupils are grouped according the the grade they are in.

Grade	9th	10th	11th	12th
Fitted for Glasses	18.7%	18.8%	14.0%	15.7%
Wearing Glasses	4.0%	5.5%	6.0%	8.0%

The younger adolescent group, 9th grade, has the largest percent fitted for, and the smallest percent wearing them. This may indicate better attention to the eyes in recent years, or it may be due to the greater restlessness of the younger adolescent.

Table XXXI

PERCENT OF BOYS TAKING MILITARY TRAINING

	Multiple-A	One-A	One-F	Multiple-F	Average
Percent	64.1	51.9	55.0	47.9	54.1
Number of cases	39	79	80	44	Total 242

Table XXXII

PERCENT OF GIRLS TAKING PHYSICAL TRAINING

	Multiple-A	One-A	One-F	Multiple-F	Average
Percent	59.3	57.5	65.5	68.7	60.3
Number of cases	91	120	58	16	285

Two tendencies are noticed in the above tables. As the quality of scholarship declines, there are fewer boys taking military training, but more girls taking physical training. Interest may be a factor. Military training is generally disliked, while girl's physical training seems to be popular. The latter includes indoor baseball, folk dancing, aesthetic dancing, etc.

Excuses from girl's physical training are more common among the A-pupils, as shown below.

Table XXXIII

PERCENT OF GIRLS EXCUSED FROM PHYSICAL TRAINING

	Multiple-A	One-A	One-F	Multiple-F	Average
Percent	13.1	15.0	10.3	6.2	12.9
Number of cases	91	120	58	16	Total 285

The number of boys reporting excuses from military training was negligible.

When the four scholarship groups are studied, regardless of sex, the following relationships are found.

Table XXXIV

PERCENT OF ALL PUPILS TAKING PHYSICAL OR MILITARY TRAINING

	Multiple-A	One-A	One-F	Multiple-F	Average
Percent	60.7	55.2	59.4	53.3	57.4
Number of cases	130	199	138	60	Total 527

In this table the tendency of the A-boys to take military training is balanced by the same tendency on the part of the F-girls to take physical training.

This balancing process tends to smooth over real differences which are shown in the tables on page 48.

These data can be arranged to show the relative numbers of boys and of girls in the various scholarship groups. This has been done in the table below.

Table XXXV

PERCENT OF BOYS AND OF GIRLS IN SCHOLARSHIP GROUPS

	Multiple-A	One-A	One-F	Multiple-F	Totals
Girls	70.0	60.3	42.0	26.6	54.1
Boys	30.0	39.7	58.0	73.4	45.9

Table XXXVI

WEEKS SPENT AWAY FROM PHOENIX LAST SUMMER

Weeks	Number of cases Multiple-A	One-A	One-F	Multiple-F	
15	5	7	12	4	Practically
14	1	1	0	0	all summer
13	0	1	0	0	away
12	9	19	15	3	
11	0	0	0	0	Three
10	4	6	3	0	months
9	1	2	0	0	away
8	4	7	3	2	
7	3	0	4	0	Two
6	2	4	6	4	months
5	3	4	1	0	away
4	9	9	11	3	
3	10	13	3	3	One
2	15	26	14	4	month
1	5	15	4	2	away
None	54	93	56	31	All summer in Phoenix
Totals	125	207	132	56	Total 520

THE ABOVE DATA BY PERCENTS

Weeks	Multiple-A	One-A	One-F	Multiple-F	
13 to 15	4.8	4.3	9.0	7.1	Practically all summer away
9 to 12	11.5	13.0	13.6	5.3	Three months away
5 to 8	9.6	7.2	10.6	10.7	Two months away
1 to 4	31.5	30.4	24.2	21.4	One month away
None	43.5	44.9	42.4	55.3	All summer in Phoenix

The above table is read: Of the Multiple-A pupils, 4.8% were away from Phoenix from thirteen to fifteen weeks; 11.5% were away nine to twelve weeks; 9.6% were away five to eight weeks, etc. Similarly, 4.3% of the One-A pupils were away 13 to 15 weeks, etc.

Few people remain in Phoenix during the summer as a matter of choice. It is entirely too hot there. Getting away from Phoenix for a part of the hot season is something of an economic matter. Nearly everyone, who can manage it at all, goes away to a cooler place for a part of the summer.

In the last table, it is shown that the F-pupils have a higher percentage in the group which spends practically all of the summer away from Phoenix. More of the F-pupils also spend all of the summer in Phoenix. This suggests two separate groups, of widely different economic status, among the F-pupils. To a certain extent the same is true of the A-pupils, but the contrast is greater between the extreme economic limits of the F-pupils. These F-pupils, apparently, include a larger percentage, (7.1%), who are rich enough to spend all summer in a cooler place, together with a larger percentage, (55.3%), who must stay all summer in Phoenix.

Other data in this study suggest that the F-pupils come from the economic extremes of the population, while the A-pupils tend to come from homes of more average economic status.

Within the F-group itself, however, there seems to be a tendency for its members to come from the lower, rather than the upper, economic extreme.

These data do not support the theory that staying in Phoenix during the summer accounts for a pupil doing failing work during the Fall semester. The A-pupils and the F-pupils are too evenly matched in this matter of summer residence in Phoenix.

If the hot summer season is really a factor, its effects would be noticeable when the Phoenix pupils are tested by standardized achievement tests. In both the Stanford Achievement Test and the Iowa Entrance Examination for 12th grade pupils, the Phoenix norms compared very favorably with the averages made in other parts of the country.

Table XXXVII

FREQUENCY DISTRIBUTION OF DISTANCES FROM SCHOOL

CITY

Blocks	Multiple-A	One-A	One-F	Multiple-F	Total
1 to 2.9	4	8	4	1	17
3 " 5.9	8	10	8	0	26
6 " 9.9	16	24	24	9	73
10 " 12.9	20	20	9	7	56
13 " 15.9	14	13	11	3	41
16 " 18.9	4	16	13	6	39
19 " 21.9	11	11	3	2	27
22 " 24.9	4	4	8	2	18
25 or over	9	11	11	2	33
Totals	90	117	91	32	330

Measures of central tendency

	A-Pupils	F-Pupils
Q-1	8.1	8.3
Median	12.5	12.5
Mean	13.0	12.8
Q-3	19.1	18.0

Table XXXVIII

FREQUENCY DISTRIBUTION OF DISTANCES FROM SCHOOL

COUNTRY

Miles	Multiple-A	One-A	One-F	Multiple-F	Total
1	2	2	5	1	10
2	7	5	1	3	16
3	11	20	7	8	46
4	5	10	6	6	27
5	8	11	4	1	24
6	5	7	4	4	20
7	1	6	8	1	16
8	2	8	1	0	11
9	3	3	1	0	7
10 or over	1	5	8	2	16
Totals	45M	77	45	26	193

Measures of central tendency

	Q-1	Median	Mean	Q-3
A-pupils	3.3	4.6	4.8	6.0
F-Pupils	3.3	4.0	4.5	6.0

The data in the last two tables show no considerable contrast between the two groups. Indirectly, they show the distribution between city and country, as shown below.

Table XXXIX

DISTRIBUTION OF PUPILS BETWEEN CITY AND COUNTRY

	Multiple-A	One-A	One-F	Multiple-F	Total
City	66.6%	60.3%	66.9%	55.1%	63%
Country	33.3%	39.7%	33.1%	44.9%	37%

The pupils included in this study come from the city and from the country in the ratio of about two to one. A slightly larger percent of the A-pupils come from the city, while a noticeably larger percent of the F-pupils come from the country.

Table XL

MEANS OF GETTING TO SCHOOL

City

Number of cases

	Multiple-A	One-A	One-F	Multiple-F	Total
Walking	47	80	57	16	200
Street car	8	12	12	1	33
Auto	24	18	8	6	56
Bicycle	5	7	14	11	37
Totals	84	117	91	34	326

THE ABOVE DATA, BY PERCENTS

	Multiple-A	One-A	One-F	Multiple-F	Total
Walking	55.9	68.3	62.6	47.0	61.3
Street car	9.5	10.2	13.1	2.9	10.1
Auto	28.6	15.3	8.7	17.6	17.1
Bicycle	6.0	5.9	15.3	32.3	11.3

Table XLI

MEANS OF GETTING TO SCHOOL
Country

Number of cases

	Multiple-A	One-A	One-F	Multiple-F	Totals
Walking	6	2	1	1	10
Street car	10	17	3	6	36
Auto	25	49	27	13	114
Bicycle	4	9	13	5	31
Totals	45	77	44	25	191

THE ABOVE DATA, BY PERCENTS

	Multiple-A	One-A	One-F	Multiple-F	Totals
Walking	13.3	2.6	2.2	4.0	5.2
Street car	22.2	22.0	6.8	24.0	18.8
Auto	55.5	63.6	61.3	52.0	59.6
Bicycle	9.0	11.6	29.5	20.0	16.4

TableXLII

MEANS OF GETTING TO SCHOOL
Both city and country

Number of cases

	Multiple-A	One-A	One-F	Multiple-F	Totals
Walking	53	82	58	17	210
Street car	18	29	15	7	69
Auto	49	35	35	19	170
Bicycle	9	16	27	16	68
Totals	129	194	135	59	517

THE ABOVE DATA, BY PERCENTS

	Multiple-A	One-A	One-F	Multiple-A	Totals
Walking4	40.1	42.4	42.9	28.8	40.6
Street car	14.0	14.9	11.1	11.8	13.3
Auto	38.0	18.0	25.9	32.2	33.0
Bicycle	7.0	8.2	20.0	27.1	13.1

Table XLIII

DAYS MISSED THIS YEAR ON ACCOUNT OF SICKNESS

	All A-Pupils		All F-Pupils	
Days missed	Cases	Per Cent	Per Cent	Cases
None	88	27.5%	22.6%	40
One to Five	140	43.8	40.1	71
Six to Ten	48	15.0	20.3	36
Over Ten	43	13.4	16.9	30
Totals	319			177

The A-Pupils have a larger per cent of their number in the more desirable first and second groups, and likewise, fewer in the less desirable third and fourth groups. This becomes more evident when they are grouped as follows:

	All A-Pupils	All F-Pupils
Less than six days	71.4%	62.7%
More than six days	28.4%	37.3%

If absence due to sickness is a real factor in determining the quality of work done in school, one would expect to find more absences among those pupils who failed in more than one subject, and correspondingly fewer absences among those pupils who made a grade of A in more than one subject. In the following table the above data are arranged in such a way as to contrast the four scholarship groups in regard to number of days missed this year on account of sickness.

Table XLIV

DAYS MISSED THIS YEAR ON ACCOUNT OF SICKNESS

Days Missed	Number of cases Multiple-A	One-A	One-F	Multiple-F	Totals
None	34	54	28	12	128
1 to 5	66	74	51	20	211
6 to 10	15	33	28	8	84
Over 10	12	31	18	12	73
Totals	127	192	125	52	496

THE ABOVE DATA BY PERCENTS

Days Missed	Multiple-A	One-A	One-F	Multiple-F	Totals
Nome	26.7	22.9	22.4	23.0	25.8
1 to 5	52.0	38.5	40.8	38.0	42.5
6 to 10	11.8	17.1	22.4	16.0	16.9
Over 10	9.3	16.1	14.4	23.0	14.7

Grouping together those pupils in all scholarship groups who were absent less than six days and comparing them with those who were absent more than six days, we have the following:

Days Missed	Multiple-A	One-A	One-F	Multiple-F	Totals
Less than six	78.7	61.3	63.2	61.0	68.3
More than six	21.1	33.2	36.8	39.0	31.6

Whether good attendance is an important factor or not, the A-pupils have a noticeably better record in this respect than the F-pupils.

SUMMARY OF CHAPTER V

VISION

Eye strain was reported by 27% of the F-Pupils and by 19% of the A-Pupils.

Headache while reading was reported by about 15% of the pupils in each group.

Ability to see the blackboard without difficulty was reported by 90% of each group.

Difficulty in seeing the blackboard was reported by 9% of the F-Pupils and by 6% of the A-Pupils.

Twenty-three per cent of the F-Pupils have been fitted for, and 9.5% of them are wearing, glasses.

Seventeen per cent of the A-Pupils have been fitted for, and 6.9% of them are wearing, glasses.

Considered by classes, or grades, the 9th-grade pupils report the highest per cent (18.7%) fitted for, and the lowest per cent (4%), wearing glasses.

The per cent actually wearing glasses increases each year from 4% in the 9th-grade to 8% in the 12th-grade.

PHYSICAL TRAINING

Sixty-four per cent of the A-boys and 54% of the F-boys reported that they were taking military training.

Physical training was reported by 68.7% of the F-girls, and by 59% of the A-girls.

Excuses from physical training were reported by 13.9% of the A-girls and by 6.2% of the F-girls.

Excuses from military training reported by boys were negligible, although many are known to have such excuses.

When boys and girls are considered together, 60% of the A-pupils and 57.4% of the F-pupils reported that they were taking physical training or military training.

These data show, incidentally, that the girls furnish 70% of the multiple-A pupils and only 26% of the multiple-F pupils. The boys furnish 30% of the Multiple-A pupils and 73% of the multiple-F pupils.

SPENDING THE SUMMER IN PHOENIX

The hot summer climate of Phoenix does not appear to affect the scholarship of pupils who stay there, either all summer, or any part of the summer. The facts in this case are opposed to popular belief that this is a factor of considerable importance.

DISTANCE FROM SCHOOL

The two groups of pupils show little difference in respect to median distance from school, either in the city or in the country. The median city distance in each group is twelve blocks. The median distance in the

country is four miles in each group. Incidentally, these data show that the city pupils furnish slightly more than their proportion of the very good pupils, while the country pupils furnish somewhat more than their proportion of multiple-F pupils.

MEANS OF GETTING TO SCHOOL

Sixty per cent of all the city pupils walk to school. The scholarship groups show little contrast, except that more of the F-group report bicycles, due to the larger number of boys in that group.

About 60% of the country pupils come in automobiles; about 20% come in street cars. The scholarship groups show no considerable contrasts except as to the number of bicycles used. This again is explained by the larger number of boys in the failing group.

ABSENCE DUE TO SICKNESS

Five days, or less, missed this year on account of sickness were reported by 79% of the A-Pupils and by 61% of the F-Pupils.

Six or more days missed this year on account of sickness were reported by 21% of the A-Pupils and by 39% of the F-Pupils.

Chapter VI

PARENT DATA

All of the items of the Parent's questionnaire, except No. 4, and No. 15, are tabulated and summarized in the following chapter.

Item No.4has been discussed on pages 32-36.

Item No. 15 has been discussed on pages 27-28.

PARENT DATA

Table XLV

RELATIONSHIP TO THE PUPIL

Relationship	A-Pupils	F-Pupils	Total
Father	48	19	67
Mother	71	28	99
Parents	8	5	13
Brother	2	5	3
Sister	1	1	2
Other Relative	3	0	3
Guardian	2	1	3
Totals	135	55	190

THE ABOVE DATA, BY PER CENT

	A-Pupils	F-Pupils	Total
Parents	94%	94.5%	94.2%
All others	6%	5.5%	5.8%

In this respect the two groups of pupils show practically no difference. In 52.1% of all the cases the Mother filled out the questionnaire; the Father, in 35.2% of all the cases. A fairly normal state of affairs is shown by these data. They help us in no way to find out why one group failed while the other group did excellent work.

XLVI

PARENTS CHOICE OF PUPIL'S OCCUPATION

	A-PUPILS		F-PUPILS	
Occupation	Boys	Girls	Boys	Girls
PROFESSIONAL				
Medicine	3	0	3	1 (Nurse)
Engineering	8	1	11	0
Law	4	0	0	0
Teaching	1	35	0	6
All others	4	6	0	1
BUSINESS				
General	2	2	1	1
Stenography	0	9	2	4
Commercial Art		2	0	0
MANUAL TRADES				
Mechanic	5	0	4	0
Carpenter	2	0	0	0
AGRICULTURE	3	0	4	0
HOME-MAKER	0	2	0	0
"PUPIL'S CHOICE"	6	4	3	4
DOUBTFUL	10	6	2	0
BLANK	5	15	6	1
Totals	53	82	36	18

THE ABOVE DATA, BY PER CENTS

	A-PUPILS		F-PUPILS	
Occupation	Cases	Percent	Percent	Cases
Professional	62	45.9%	40.7%	22
Business	15	11.1	14.8	8
Manual Trades	7	5.1	7.4	4
Agriculture	3	2.2	7.4	4
Home Maker	2	1.4	0.0	0
"Pupil's Choice"	10	7.4	12.9	7
Doubtful	16	11.8	3.7	2
Blank	20	14.8	12.9	7
Totals	135			54 (189)

Table XLVII

LUNCH MONEY PER WEEK

Amount	A-Pupils	F-Pupils
Up to 50 cts.	3.7%	5.4%
$0.51 to $1.00	34.0	29.1
$1.01 to $1.50	26.6	14.5
Over $1.50	2.2	0.0
Lunch carried from home	1.5	3.6

Table XLVIII

MONEY FOR SCHOOL SUPPLIES

Amount	A-Pupils	F-Pupils
Up to 50 cts.	13.3%	16.3%
$0.51 to $1.00	5.2	1.8
$1.01 to $1.50	0.7	0.0

Table XLIX

MONEY FOR MOVIES

Amount	A-Pupils	F-Pupils
None	17.8%	21.8%
Up to 50 cts.	17.1	7.3
$0.51 to $1.00	2.9	1.8

Table L

POCKET MONEY

Amount	A-Pupils	F-Pupils
None	15.5%	20.0%
Up to 50 cts.	12.6	3.6
$0.51 to $1.00	5.9	1.8
Over $1.00	5.2	3.6
Pupil earns it	2.9	3.6

The data shown on page 63 suggest additional economic differences between the two groups of pupils we are comparing. The F-Pupils seem to have smaller amounts of lunch money, and also less for school supplies. The data on lunch money are probably more accurate, as this item tends to become fixed and hence more easily remembered by the parent when filling out the questionnaire. School supplies represent irregular items and are more easily forgotten. In this respect, about 20% of each group of parents answered this question with the phrase "Whatever is needed."

Fewer of the F-Parents reported money for the Movies, and those who did report this item quoted smaller amounts of money. The same can be said for the item, pocket money.

All of these data point consistently to economic differences, small, perhaps, yet distinct. Even the phrase, "carries the lunch from home," volunteered on a few papers, shows that this practice is more common among the F-Pupils. Excellent school lunches are served in the school cafeteria on a non-profit basis.

Table LI

PERCENTAGE OF PARENTS OF A AND F-PUPILS

WHO HAVE VISITED SCHOOL THIS YEAR

Answer	A-pupils	F-pupils
One time	17.7	18.1
More than one time	18.4	23.6
No	60.5	53.6
Blank	3.5	5.4

Table LII

NUMBER OF TEACHERS THE PARENTS HAVE MET THIS YEAR

Answer	A-pupils	F-pupils
All	5.6%	1.8%
Four	5.0	1.8
Three	7.8	7.3
Two	14.7	5.4
One	13.4	12.7
None	41.7	56.3
Blank	11.4	14.5

Table LI is read: Of the parents of A-pupils 17.7% reported that they had visited school one time; 18.4% teported that they had visited school more than once etc.

Table LII is read: Of the parents of A-pupils 5.6% reported that they had met all of their pupil's teachers this year; 5% reported that they had met four teachers, etc.

Visits to school are reported more frequently by the parents of F-pupils. Parents of A-pupils seem to be more active in meeting more than one of their Child's teachers.

The above data suggest that the parents of failing pupils are inclined to come to school to see one teacher, probably the one with whom the child is failing, and go back home without meeting the child's other teachers. Undoubtedly there are reasons for this. To the writer, the economic distinctions, found everywhere in this study, are suggestive. The convenience of an automobile, number of children, quality of clothing, etc. might well have something to do with parent's visits to school.

Table LIII

OCCUPATIONS OF PARENTS

Occupation	A-Pupils	F-Pupils
PROFESSIONAL		
Physician	4	0
Attorney	1	0
Engineer	2	0
Teacher	7	2
Nurse	1	0
	15	2
BUSINESS		
Executive	2	0
Banker	1	0
Insurance	2	1
Merchant	7	2
Contractor	1	0
Business Woman	1	0
Saleswoman	2	0
Salesman	2	1
Buyer	0	1
Realtor	2	0
Hotel	2	2
Peddler	0	1
	22	2
SKILLED WORK		
Tailor	1	0
Carpenter	2	6
Mechanic	3	1
Clerk	1	3
Painter	1	1
Plumber	0	1
Stonemason	0	1
	8	13
MANUAL WORK		
Truck-driver	1	0
Tent and Awning	1	0
Rug-weaver	1	0
Waitress	1	0
Maid	1	0
Laborer	3	0
	8	0
PUBLIC SERVICE		
Gov't Employee	3	0
City "	1	2
	4	2
HOUSEWIFE	64	18
RANCH OR FARM	14	11
BLANK	6	2
Total Cases	141	56

Table LIV

OCCUPATIONS OF PARENTS, BY PERCENTS

Occupation	A-pupils	F-pupils
Professional	10.6	3.5
Business	15.6	14.3
Public Service	2.8	3.5
Skilled work	5.6	23.2
Manual Work	5.6	0.0
Ranch or farm	9.9	19.6
Housewife	45.4	32.1
Blank	4.2	3.5
Total cases	142	55

The above table is read: Of the parents of A-pupils, 10.6% reported professional occupations; 15.6% reported business, etc.

The effectiveness of this part of the study is reduced by the large number of mothers who gave the answer "housewife". The questionnaire did not emphasize, sufficiently, the fact that the father's occupation was wanted, although a space for it had been provided. It must be kept in mind, however, that the questionnaire was a long one, and while it received courteous attention in most cases, one could hardly expect the parents to concentrate very hard upon it.

The above data may help to explain the many economic differences between the two groups of pupils and between their parents. Fewer parents of F-pupils are found in the business and professional classifications, and more in public service, skilled work, and agriculture. One interesting exception is the lack of parents of F-pupils in the Manual work classification.

Table LV

INCOMES OF PARENTS

Income	A-Pupils	F-Pupils
Less than $1.000	6	3
$1,000 to $1,199	6	2
1,200 to 1,499	7	3
1,500 to 1,799	8	10
1,800 to 1,999	4	3
2,000 to 2,499	18	8
2,500 to 2,999	10	2
3,000 to 3,499	10	4
3,500 to 3,999	4	4
4,000 to 4,999	8	0
5,000 to 7,499	8	1
7,500 to 9,999	11	1
10,000 or over	5	0
Total cases reporting	95	41
Blank questionnaires	46 (32.6%)	14 (25.2%)
Total cases	141	55

Measures of Central Tendency

	A-Pupils	F-Pupils
Q-1	$1,500	$1,500
Median	2,400	1,800
Mean	3,263	2,212
Q-3	3,500	3,000

The incomes of $5,000 and over account for the big difference between the Median and the Mean. For example, the five incomes of $10,000 or over, one of which is $25,000, total $79,000. This sum adds $830 to the income of each of the 95 families in the list, "A" pupils. For our purposes the Median is much better for comparing the two groups of families from which the students come. A difference of $830 per year, equal to about $69 per month, would mean a great deal higher standard of living.

In quite a number of places, in the course of this investigation, the economic superiority of the families from which A-pupils come has been suggested. The data on page 68 remove all doubt about the existence of this economic difference and give us an approximate measure of it also. While the incomes of the lower 25% of each group tend to be equal, there is a difference of $600 between the median incomes, and of $500 between those at the third quartile. In this connection, it should be remembered that the A-Pupils tend to come from smaller, and the F-Pupils from larger families, as was found when comparing the number of children at home (See page 42).

The number of blank questionnaires may seem quite large until we consider that the family income is a topic which many people regard as no-one else's business. It was noticeable that many people who omitted their income did not omit the taxes which they paid. In some quarters it was thought that the purpose of this inquiry was to gather data, which would be used in a campaign for more buildings. To the extent that this was true, there would be a tendency for people to withhold information concerning their incomes, and possibly to exaggerate the amount of their taxes.

Table LVI

TAXES PAID BY PARENTS

Taxes	A-Pupils	F-Pupils
Less than $10.00	3	0
$ 10 to 24.99	8	5
25 to 49,99	9	6
50 to 99.99	11	7
100 to 199.99	16	9
200 to 299.99	14	3
300 to 399.99	9	2
400 to 499.99	7	1
500 to 599.99	5	3
600 to 799.99	6	1
800 to 999.99	1	0
1,000 or over	5	0
Total cases reporting	94	37
Blank questionnaires	38 (26.9%)	15 (27.8%)

Measures of Central Tendency

	A-Pupils	F-Pupils
Q-1	$ 60	$ 45
Median	200	100
Mean	275	160
Q-3	400	250

As would be expected from the difference in incomes, the two groups of families from which these students come report marked differences in taxes paid. The rather large difference between the Median and the Mean in both groups is due, in the case of the A-Pupils, to the number of high salaries reported, and in the case of the F-Pupils to the large number of farmers or ranchers in that group. The County taxes are much higher than those in the city, due in part to a very ambitious County road-building program.

Table LVII

HOME OWNERSHIP

	A-Pupils	F-Pupils
Per cent reporting "yes"	68.5%	69.6%
Blank questionnaires	31.0	30.0

Table LVIII

FAMILIES LIVING IN RENTED PROPERTIES

	A-Pupils	F-Pupils
Per cent reporting "yes"	30.9	30.9

These two items would be expected to supplement each other, as they actually do. The two groups of families are very much alike in this respect. These data do not help us explain why children from one group of homes failed, while others did excellent work.

Table LIX

PARENTS REPORTING AUTOMOBILES FOR BUSINESS AND PLEASURE

	A-Pupils	F-Pupils
Business car	26.7%	32.7%
Pleasure car	15.5%	10.9%
Both Business and Pleasure	27.4%	30.9%

These data show only small differences between the two groups of families. It is probable that differences, if they exist, would be shown in the quality of the cars; rather than in the per cents having some kind of a car.

Table LX

PARENTS REPORTING THAT PUPILS HAVE FREE USE OF AUTOMOBILE

Answer	A-Pupils	F-Pupils
Yes	14.7%	16.3%
No	60.0%	54.5%
Blank questionnaires	23.2%	29.0%
Number of cases	142	55

Table LXI

PARENTS REPORTING THAT PUPILS TAKE AUTOMOBILE TO SCHOOL

Answer	A-Pupils	F-Pupils
Yes	13.9%	7.1%
No	62.5%	64.3%
Blank reports	23.6%	28.5%
Number of cases	144	56

In the item, "Free Use of Automobile," we find no significant contrast between the two groups. Taking the car to school is noticeably more common among the A-Pupils. Many of the blank reports were from parents who have no car. The theory that free use of the automobile, including taking it to school, is accompanied by poorer scholarship receives no support from these data. The average teacher observes that use, or rather abuse, of an automobile around school is quite common among students of low scholarship. These data, however, throw no light upon this situation. In many cases the parents do not know the car is being used. These data come from the parents. Perhaps data from other sources, say from the students, themselves, would give different results.

Table LXII

STATES THE PARENTS CAME FROM

State	A-Pupils	F-Pupils
NEW ENGLAND		
Maine	1	0
Massachusetts	1	0
NORTH CENTRAL		
New York	3	2
Pennsylvania	4	2
District of Columbia	1	0
SOUTHERN		
Virginia	0	1
West Virginia	0	1
Tennessee	2	2
Texas	14	4
North Carolina	0	1
South Carolina	1	1
Mississippi	1	2
Oklahoma	2	1
Georgia	2	0
Alabama	1	1
Louisiana	1	0
Kentucky	4	1
Arkansas	0	2
MIDDLE WEST		
Ohio	7	1
Indiana	6	1
Illinois	10	4
Iowa	6	0
Missouri	9	3
Kansas	8	3
Nebraska	4	0
Michigan	4	0
North Dakota	0	1
Minnesota	1	0
MOUNTAIN		
Colorado	10	1
New Mexico	9	1
Montana	2	2
Idaho	0	1
Utah	3	0
Arizona (Native)	5	3
PACIFIC COAST		
California	15	9
Oregon	1	2
Washington	1	0
FOREIGN		
Scotland	0	1
Mexico	1	1
Total cases	140	54

Table LXIII

STATES THE PARENTS CAME FROM

State	A-Pupils				F-Pupils
	Cases	Percentages			Cases
New England	2	1.4	1.0	0.0	0
North Central	8	5.7	6.2	7.4	4
Southern	28	20.0	22.7	29.6	15
Middle West	55	29.3	35.0	24.0	13
Mountain	29	20.7	19.1	14.8	8
Pacific Coast	17	12.1	14.4	20.4	11
Foreign	1	0.7	1.5	3.7	2
Number of cases	140		194		53

Figures in red indicate averages for the entire population included in this study, or, the total number of families.

The families which furnish the A-pupils come from the Middle West, Mountain, Southern, and Pacific Coast States chiefly, and in the order named. The families which furnish the F-pupils come chiefly from Southern, Middle Western, Pacific Coast, and Mountain States, and in the order named.

The modal family in the A-group comes from the Middle West, where standards of public education are relatively high. The modal family in the F-group comes from the South, where standards of public education are not so high as in the Middle West.

On the other hand there is the possibility that the family came to Arizona early in the school career of the child. In such cases the effects of different educational standards would be minimized.

Table LXIV

RECOMMENDATIONS OF PARENTS

A detailed list of these is found in the appendix, page 85. Only a summary of this part of the Parents' questionnaire will be given here. The ten items in the table below are arranged in the order of frequency with which they were mentioned.

Subject	Number of times reported A-Parents	F-Parents
Scholarship	40	18
Faculty	32	15
Administration	31	8
Morals	20	8
Discipline	15	6
Commendation	11	6
Activities	9	6
Military Training	8	6
Health	11	0
Vocations	5	3
Number of reports	82	43
Per cent of blank reports	39.2	21.8
Suggestions from each parent reporting	2.2	1.7

A larger per cent of the parents of F-pupils used this space for comment, but the parents of A-pupils made more comments per person. Remarkable unity of emphasis is found in the two groups of recommendations.

Out of the long list of suggestions which were made only once, for the most part, it is interesting to single out the definite recommendations which were most often made. These are given below.

Table LXV

SPECIFIC RECOMMENDATIONS OF PARENTS

Recommendation	Number of times reported by A-Parents	F-Parents	Both
Provide supervised study	15	5	20
Too much home work	8	2	10
Allow pupil to take five subjects	6	0	6
More strict supervision of boys and girls when they are together	5	2	7
Well satisfied	5	2	7
Firmer discipline needed	4	2	6
Too much play in school	4	1	5
Abolish Military Training	4	2	6
Faculty partial to children of parents of wealth or position	4	2	6

No other recommendation was made more than three times in one group, or twice in each group.

These data show a higher percentage of the A-Parents recommending,

Supervised study
Less home work
Five subjects for some pupils
Better moral supervision
Less play in school

The two groups recommend the following in proportion to their numbers, i. e., roughly two to one:

Firmer discipline
No Military Training
Less partiality by teachers

The A-Parents seem more inclined to commend the work of the school.

SUMMARY OF CHAPTER FIVE

Ninety-four per cent of the pupils in each group are living with their parents.

The parents of each group wish their children to enter a professional or business career. About 40% in the former and about 11% in the latter. Doubt as to this matter is expressed more freely by the A-Parents. A larger per cent of the F-Parents left this choice up to the pupil.

The F-Parents furnish less money for their children's lunch, school supplies and for spending money.

The F-Parents visit the school more frequently, but have not met as many of their children's teachers as have the A-Parents.

Nearly half of the A-Parents and one-third of the F-Parents reported occupation as "Housewife."

Fewer F-Parents are found in the Business and Professional classifications and more of them in Public Service, Skilled Work and Agriculture.

The mean income of A-Parents was reported as $3,263, Median $2,400, Q-1 $1,500, and Q-3 $3,500.

The mean income reported by F-Parents was $2,212, Median $1,800, Q-1 $1,500, and Q-3 $3,000.

SUMMARY OF CHAPTER V, continued

The mean annual taxes reported by A-Parents was $275, Median $200, Q-1 $60, and Q-3 $400.

The mean annual taxes reported by F-Parents was $160, Median $100, Q-1 $45, and Q-3 $250.

Home ownership was reported in about 69% of the cases in each group of parents.

Living in rented property was reported in about 30% of the cases in each group of parents.

Business cars were reported in somewhat greater numbers by the F-Parents, pleasure cars in greater measure by the A-Parents.

Cars for both business and for pleasure were reported in about 30% of the cases in each group.

F-Pupils have free use of the car in slightly greater measure than do the A-Pupils, but the car is taken to school by nearly twice as large a per cent of the A-Pupils.

Parents come from all of the states of the Union except thirteen. The modal family in the A-group comes from the middle west, while the modal family in the F-group comes from the South.

Over 150 separate recommendations were made by the parents in both groups together. Two-thirds of these were mentioned only once. The same topics were mentioned frequently in both groups.

SUMMARY OF CHAPTER V, continued.

The returns on this part of the questionnaire denoted a somewhat closer touch with school affairs, as well as more praise for the school, on the part of the parents of A-pupils.

Chapter VII

ACHIEVEMENT AND INTELLIGENCE SCORES

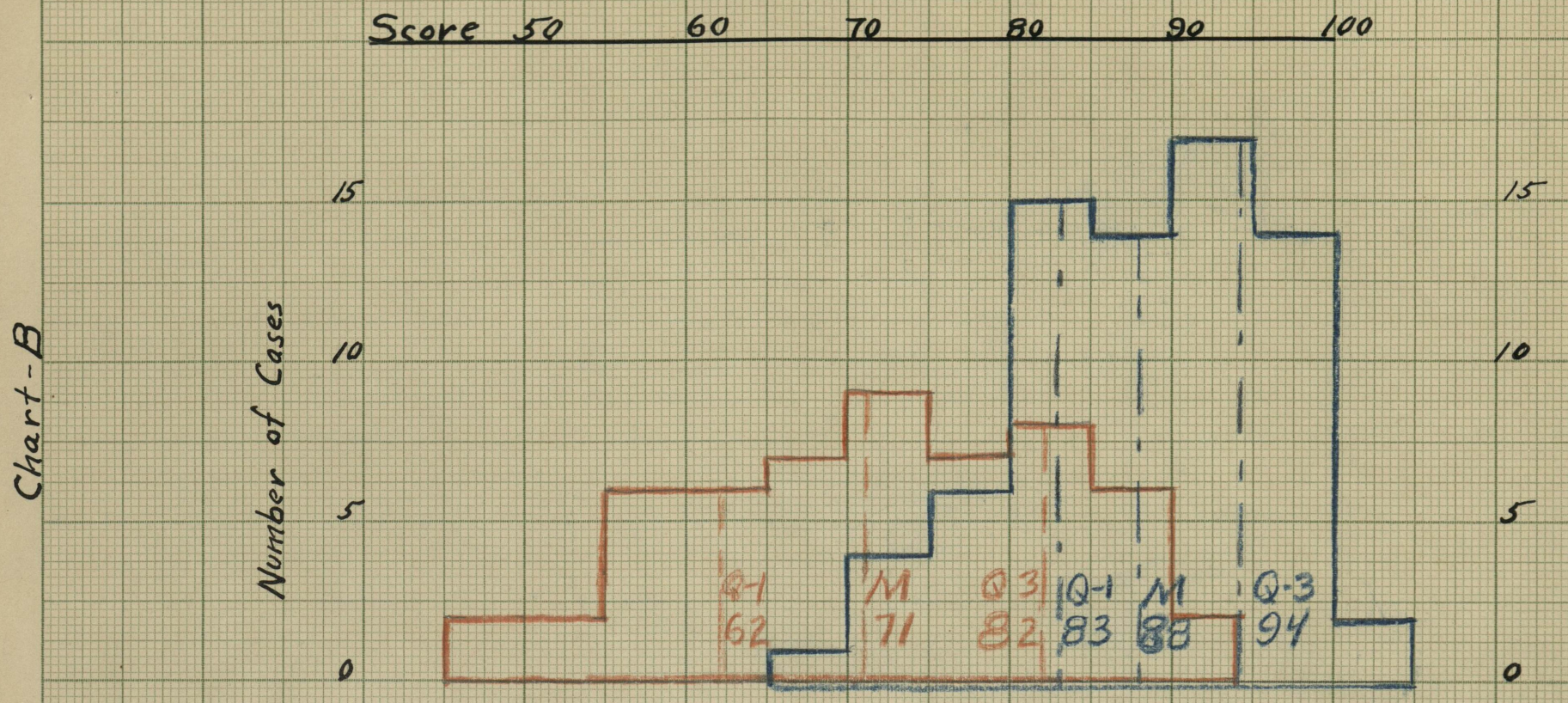
The following scores were obtained from the unpublished report of a survey of the Phoenix Union High School, conducted in October, 1923, by the United States Bureau of Education.

The personnel of the survey staff is given on pages 6 and 7.

Chart - B

Composite Scores of 127 Freshmen

Stanford Achievement Test, Form A,



A-Pupils in blue 73 Cases Range 65-100

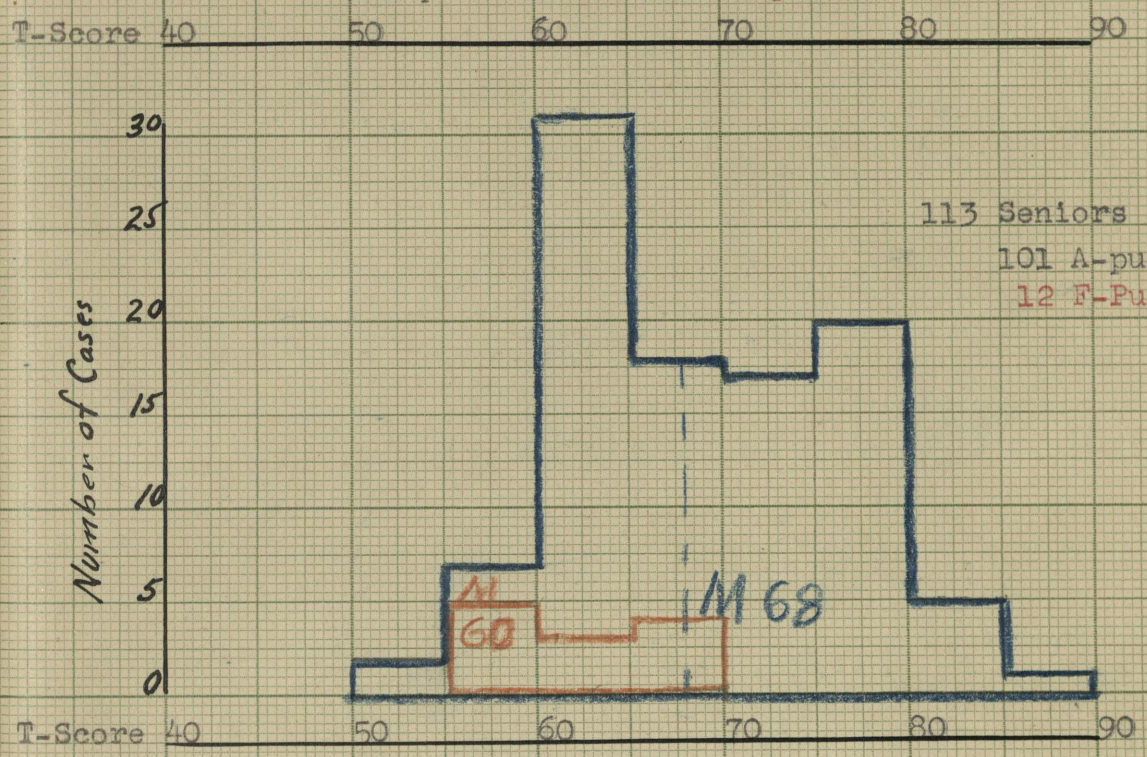
F Pupils in red 54 Cases Range 45-94

Chart - B

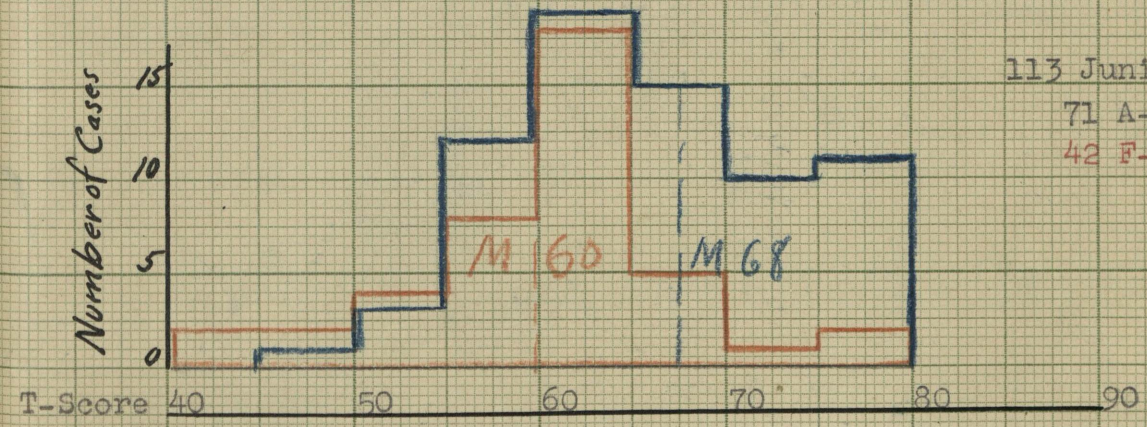
Chart-C

DISTRIBUTION OF T-SCORES THORNDIKE-McCALL READING SCALE

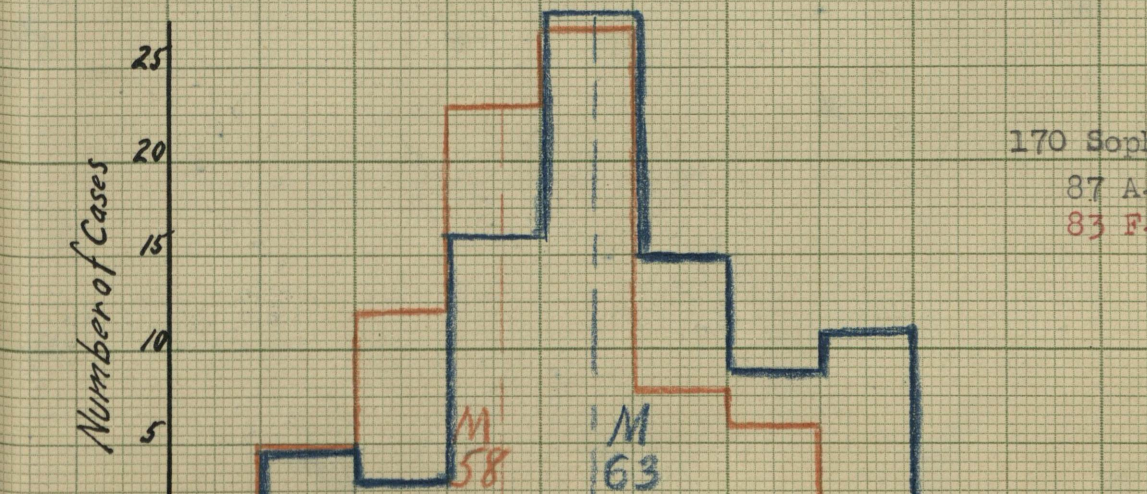
A-Pupils in Blue F-Pupils in Red



113 Seniors
101 A-pupils
12 F-Pupils



113 Juniors
71 A-Pupils
42 F-Pupils



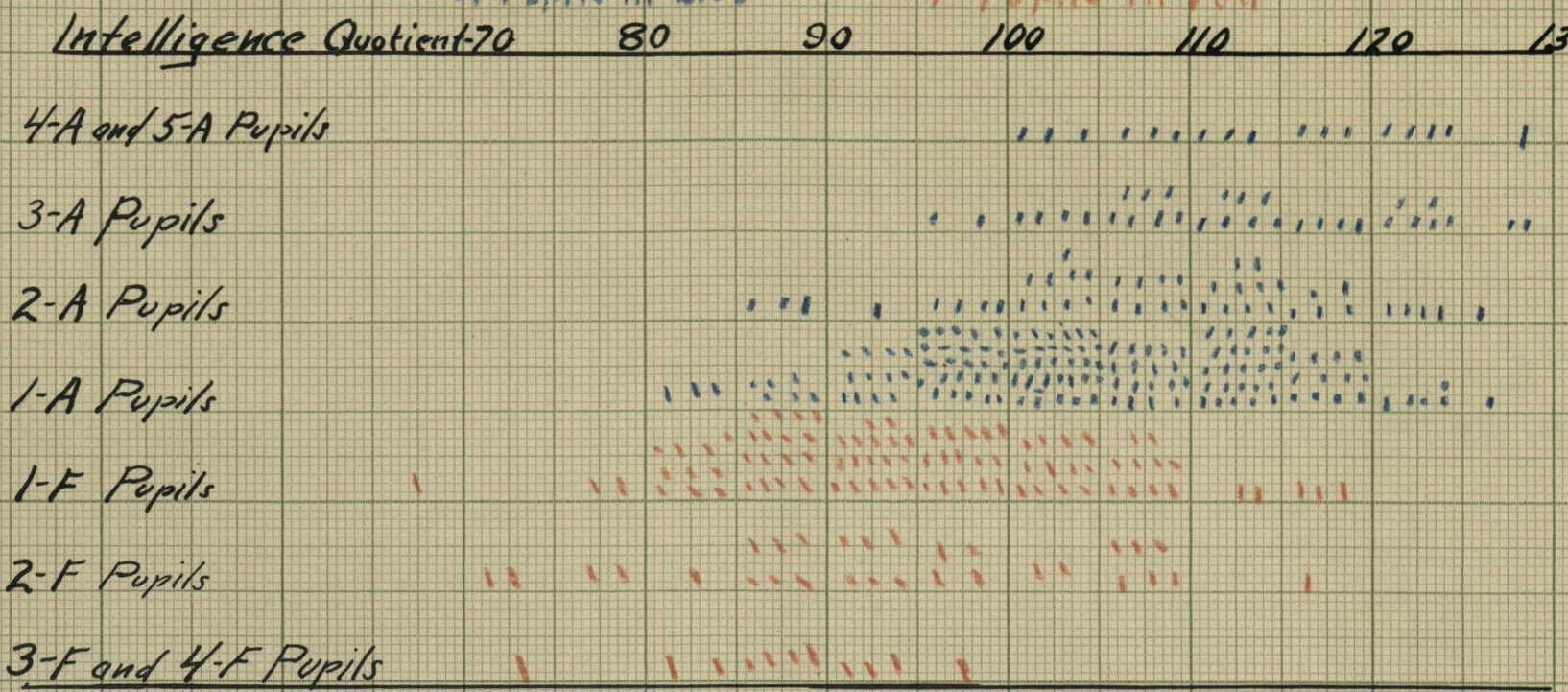
170 Sophomores
87 A-Pupils
83 F-Pupils

Chart-D

Relation between Pupil's I.Q. and the Number of "A"s or "F"s He Made

Otis Self-Administering Test of Mental Ability - Form A

A-Pupils in blue F-Pupils in red



Each mark represents one pupil

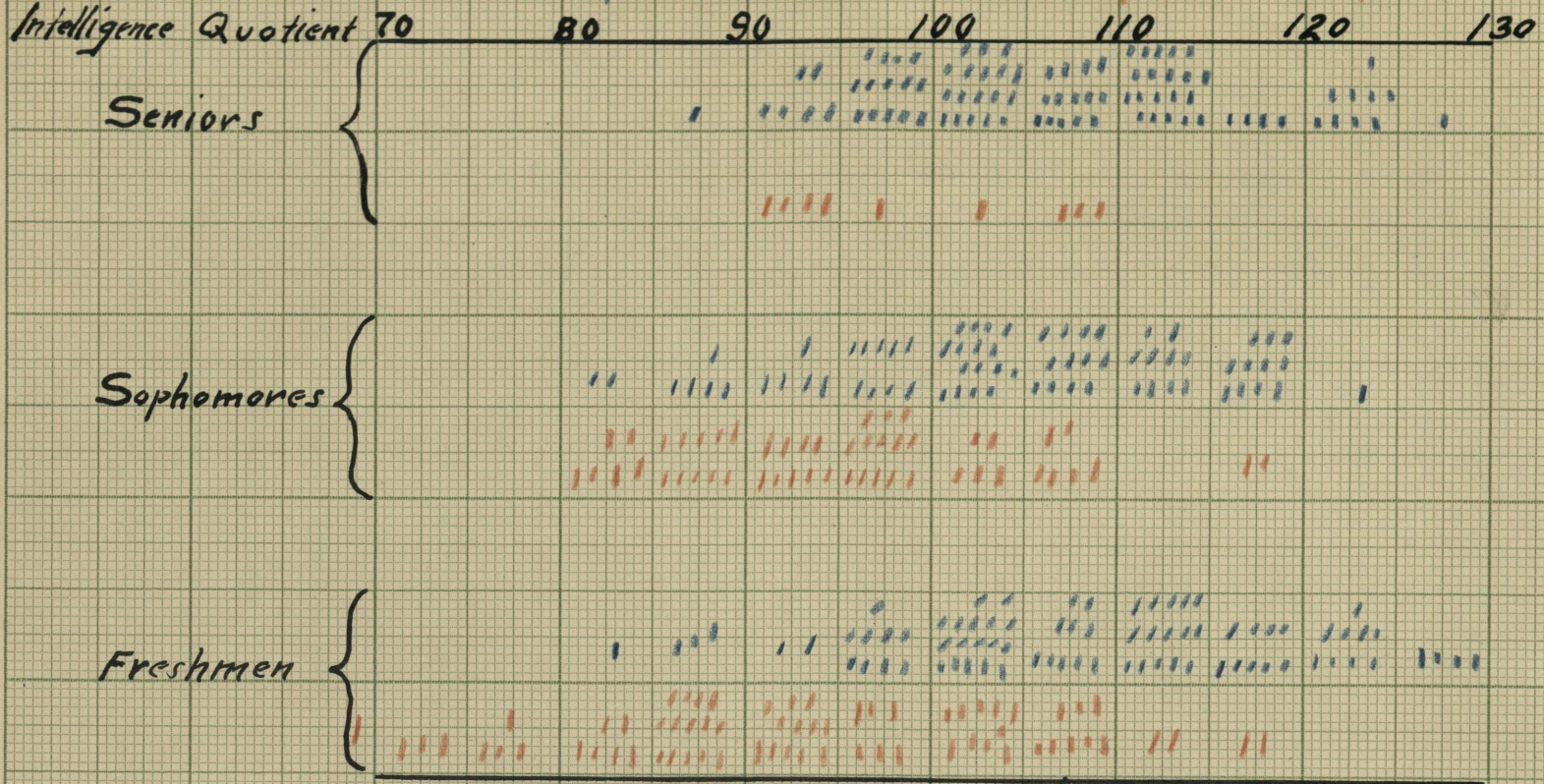
Chart-D

	3-F & 4-F Pupil	2-F Pupils	1-F Pupils	1-A Pupils	2-A Pupils	3-A Pupils	4&5-A Pupils
Q-1	93	102	102	112	114	120	120
Median	89	93	94	104	108	110	110
Q-3	85	88	88	98	102	106	106

Chart - E

Relation between I.Q.s of Pupils and the Grade They are in

A-Pupils in blue F-Pupils in red



Each mark represents one pupil

Measures of Central Tendency

	A-Pupils				F-Pupils			
	Q-1	M	Q-3	Cases	Q-1	M	Q-3	Cases
Seniors	101	107	115	88	95	96	107	9
Sophomores	100	105	112	71	88	94	100	51
Freshmen	102	109	115	81	88	92	101	70

SUMMARY OF CHAPTER VII

The median composite score of A-pupils in the Stanford Achievement Test was 88; that of the median F-pupil was 71. Had these scores been available when these Freshmen enrolled for high school work, there is no doubt that many of these failures might have been prevented.

The T-scores made by Sophomores, Juniors, and Seniors indicate wide differences between the reading achievements of the A and of the F-pupils.

The median failing Senior and Junior have the same reading achievement, which is below that of an 8th grade pupil on the standard scale.

The median failing Sophomore's score, 58, is just below that of the average 7th grade pupil.

These facts should have been at hand before rather than after the failure occurred.

The I.Q. of the median F-pupil is between 92 and 96 as determined by the Otis Self-Administering Test of Mental Ability, Form A. The I.Q. of the median A-pupil is between 105 and 109.

The grade classification of a pupil shows no difference in his I.Q., in fact, some of the highest ones are found in the Freshman class.

CONCLUSIONS

Why did these three hundred pupils fail?

1. They were not as well prepared to do high school work, as shown by comparative scores made in the Stanford Achievement Test. Fewer of them went to Kindergarden. More of them entered the first grade late. The average F-pupil was nine months older, at the time these data were gathered, than the average A-pupil in the same grade.
2. They spent less time at home on their studies, more time on home or farm duties, and more of them reported work, for pay, away from home.
3. Time given to activities and amusements does not appear to have been a factor in their failure.
4. Their parents did not make them study. They did not read books like Whipple's "How to Study Effectively", although there were 100 copies of it in the school library.
5. There were more children at home, and fewer other conditions favorable to study.
6. They reported more visual defects which interfere with sustained and effective study.
7. Spending all, or any part, of the summer in the heat at Phoenix does not appear to have been a factor.
8. They lost more days of school on account of sickness.

9. They had less money for lunch and for school supplies.
10. Their parents took less interest in school affairs, met fewer of their teachers, etc.
11. The mean income of the families from which they came was $2,212, compared with $3,263 for the families which furnished the A-pupils. The median income of the families of F-pupils was $ 1,800; for families of A-pupils, $2,400.
12. The mode of the families which furnished the F-pupils came from a part of the United States where standards of public education are not high.
13. Their achievement in reading, as measured by the Thorndike-McCall Reading Scale was that of the average 7th or 8th grade pupil. To be more definite, the median failing Sophomore had average 7th grade achievement in reading. The median failing Senior and the median failing Junior, each, had average 8th grade achievement in reading. The reading scores of Freshmen were not available.
14. Their ability to learn, as measured by the Otis Self-Administering Test of Mental Ability, Form B., was measurable less than the average and very noticeable less than that of the median A-pupil.
15. The teacher as a factor in the failure of these pupils was not studied.

16. In this study it was found that the girls furnish 70% of the multiple-A pupils and only 26% of the multiple F pupils, while the boys furnish 30% of the multiple-A pupils and 73% of the multiple-F pupils.

17. There seems little doubt that the number of failures in this school can be greatly reduced by measuring the pupils' ability before they enroll for high school work, and then adjusting their work to their abilities and limitations.

APPENDIX

Selected References

Detailed Recommendations of Parents

Pupil's Questionnaire, Original

Parent's Questionnaire, Original

SELECTED REFERENCES

1. Obrien, F. P., "The High School Failures" Teachers' College, Columbia University Contributions to Education, No. 102

2. Coffman, Lotus Delta, "Social Composition of the Teaching Population", Teachers' College, Columbia University, Contributions to Education, No.41

3. Jackson, F. J., "Causes of Failure in High School", Pennsylvania School Journal, January 1924. Vol.72, No.5, Page 281.

4. Odell, C. W., "The Effect of Attendance upon School Achievement", Journal of Educational Research, Dec. 1923.

5. Book, W. F., "Why Pupils Drop out of High School", Pedagogical Seminary, 1904, Vol. XI, Page 204.

6. Johnson, G. R., "Qualitative Elimination in High Schools", School Review, Vol. XVIII, Page 680, 1910.

7. Bond, O. F., "Causes of Failures in Elementary French and Spanish Courses at the College Level", School Review, April, 1924, Page 276.

8. Goodrich, T. V., and Clements, S. L., "Comparison of a Group of High School Failures with a Group of Successful Students", School and Society, Dec. 15, 1923.

9. King, Irving, "Vocational Interests, Study Habits, and Amusements of Pupils in Certain High Schools of Iowa", School Review, Mar. 1914. Vol. XXII, Page 165.

10. Bliss, Don C., "High School Failures", Journal of Educational Administration and Supervision. Mar. 1917. Vol. III, Page 125.

TABLE LXVI

Complete list of

RECOMMENDATIONS OF PARENTS

Recommendations	Number of times reported A-Parents	F-Parents
FACULTY		
Lack culture and experience	1	
Some are "time-wasters"	1	
Call on only those pupils who raise their hands	2	
Use questionable English	1	
Partial to rich children	4	2
Should be better paid	2	
Should be less mercenary	1	
Should grade fairly	1	
Should get better acquainted with their pupils	2	1
Should not favor athletes	1	
Should be better adapted to subjects they try to teach	1	2
Character not always satisfactory	1	
Should have sane religious outlook	1	
Sometimes tardy	1	
Need better discipline	1	
Assignments are too long	1	
Don't keep pupils busy	2	
Are hard to see		3
Should make lazy boys work		3
Principal is hard to see	1	
" should be changed	1	
" lacks education	1	
" " experience	1	
" " backbone	1	
Dean of Junior College allows pupils to get by with poor work	1	

"Investigate and cull out teachers who carouse all night; we have plenty of worthy girls who need the work." (F)
"Different music teachers for boys and girls." 1 (F)
"Competent teachers, not too old; do not keep the same ones year after year--make a change." (F)
"Teachers should have respect of pupils." 1 (F)
"Better teachers who will explain without losing patience." 2 (F)

RECOMMENDATIONS OF PARENTS

Recommendation	Number of times reported A-Parents	F-Parents
ADMINISTRATION		
Needs better Advisor System	1	
Abolish uniform dress	1	
Develop individuality	1	
Develop self-expression	1	
Too much politics	1	
Allow girls in woodshop	1	
Eliminate mid-year promotions into the high school	1	
Less doubting the word of pupils	1	
Allow five subjects	6	
Refuse to hire Catholics	1	
No compulsory Physical Training	1	
Have fewer assemblies	1	
Help the Freshmen more	1	
Teach penmanship to all	1	
Fire incompetent teachers	1	
More vocal music instruction	1	
Don't hold back apt students for the morons	1	
Provide a schedule for boys who must work	1	
Provide buss-transportation	1	
Prevent so much stealing		1
Have school from 8 till 4		1
Avoid mid-year confusion during enrollment		1
Correct current reports concerning morals		1
Final exams earlier for Seniors		1
Abolish Military Training	4	2
Military for first two years only	2	
Abolish favoritism in Military	1	
SCHOLARSHIP		
Too much home work	8	2
Too little home work	1	1
Library too small	1	
Too much slang		1
Study halls are too noisy	2	1
More attention to lessons	2	3
Pupils pushed too hard	1	
Provide supervised study	15	5
Abolish final examinations	3	
Better preparation for college	1	
Keep athletics up to standard	1	
Lengthen periods to 60 minutes	1	2
Teach how to study	1	
"Seems to hit the high places compared with Eastern schools		1

RECOMMENDATIONS OF PARENTS

Recommendations	Number of times reported A-Parents	F-Parents
SCHOLARSHIP, Continued		
Assignments too long at times	1	
Work too heavy at end of term	1	
Get report cards to parents		2
Proof-read annual better (my boys picture was left out)	1	
DISCIPLINE		
Student government	1	
More courtesy between teacher and pupils	1	
Firmer discipline	4	2
Too much ditching	1	3
Assemblies lack order	2	
Woman assistant to the M. P.	1	
Too much loafing early and late aroung lunch stand	1	
Too much play in school	4	1
MORALS		
Teach more respect and obedience		3
Flirting during noon hour	1	
Teach ethics	4	
Greater modesty at May Fete	1	
Religious training	1	
More uplifting assemblies	1	
Smoking on campus	1	
Read Bible in school	1	1
Girls too snobbish	1	
Drinking among boys	1	
Stricter supervision of boys and girls when together	5	2
Girls are too bold	1	
Girls are immoral	1	
Teach higher ideals	1	2
ACTIVITIES		
Too much athletics	3	
Too little athletics		1
Too many sports	1	
Too much dancing	1	
Curtail activities reasonably	1	
Football players spend too many hours on the field	1	
Too little dancing		1

RECOMMENDATIONS OF PARENTS

Recommendations	Number of times reported A-Parents	F-Parents
ACTIVITIES, continued		
Too little music		2
Too little school spirit	1	
Too little oratory		1
Too few social activities	1	
Too few literary societies	1	
HEALTH		
Tint the white buildings	1	
School Doctor or Nurse	1	
Corrective Gymnastics	1	
Swimming pool	1	
No physical training during hot weather	1	
Awnings for west windows	1	
Longer lunch period	1	
Inter-class athletics	1	
Serve wholesome lunches	1	
Sanitary basement conditions	1	
Eliminate so much climbing up steps for girls	1	
VOCATIONAL		
Vocational talks	2	
Guidance	2	2
Training		1
More art courses	1	
MILITARY		
Abolish it	4	2
Require of 1st and 2nd years	2	
Abolish favoritism	1	
"Entirely uncalled for-, expensive and abominable institution"	1	
"Teaches murder, not love"		1
"The students get disgusted with it and get to disliking school on account of it"		1
COMMENDATION		
Faculty willing to help	1	2
Well satisfied	5	2
Very much pleased	4	
No fault to find		2
Great opportunity for the pupil who is willing to work	1	

PHOENIX UNION HIGH SCHOOL

NAME _____ SCHOOL NUMBER 392
First name Last name

I. SCHOOLING.

1. Did you go to Kindergarten? ___; Where _____
2. At what age did you enter the first grade? ____
3. In the spaces below write the name of the town or school in which you attended each grade.

GRADE	TOWN OR SCHOOL	GRADE	TOWN OR SCHOOL
1 Lower / Upper	_____	7 Lower / Upper	_____
2 Lower / Upper	_____	8 Lower / Upper	_____
3 Lower / Upper	_____	9 Lower / Upper	_____
4 Lower / Upper	_____	10	_____
5 Lower / Upper	_____	11	_____
6 Lower / Upper	_____	12	_____

II. ACTIVITIES. Underline each of the following to which you gave any time during the first semester of this year. Estimate the number of minutes per week and write this sum after each activity.

Athletics	Debate	Band
Rifle Team	Annual	Orchestra
Class officer	Coyote Journal	Glee Club
Dramatics	( )	( )
Parties or Movies	Dancing	"Home Work"

III. STUDY HABITS. Do your parents make you study at home? ____
Do your parents help you with your difficulties? _____
Have you read the little book "How to Study Effectively? ___
Have you studied this little book in any class? _____
How many brothers and sisters (or other children) at Home? _
Check below (✓) any phrase which seems to describe the conditions under which you study at home:

Alone in the room	With other people in the room
Reasonably quiet place	Noticeably noisy place
At a study table or desk	Sitting in a chair without a desk

IV. ~~HEALTH~~

Do you wear glasses? ____: Were you ever fitted? _____
Does reading tire your eyes? ____ Make your head ache? ____
Can you see blackboard work without difficulty? _____
Are you taking Physical Training? ____ Military? _____
Have you a Doctor's excuse from either of the above? ____
Did you spend ALL of last summer in Phoenix? ____:
If not all of the summer, how many weeks did you spend AWAY from Phoenix? _____
How far do you live from school? Give number of:
City blocks ( ) or, if in the country, miles ( )
Check the way you usually come to school:
Walk, Streetcar, Bicycle, Auto, Motorcycle
How many days this school year have you missed on account of sickness? _____

NOTE. Do not sign or in any way identify this report. No attempt will be made to identify it. Its chief value lies in this fact. Return it promptly, please, either with the pupil, or, if you prefer, mail it to Box 33, Phoenix Union High School, Phoenix, Ariz. Allow us to thank you in advance for your cooperation.

1. Check your relation to the pupil ✓ (Father, Mother, Brother (Sister, Other Relative, Guardian.

2. The age of your child. Years 17; Months ___; Sex F; Grade Sophs.

3. What occupation do you wish your child to follow? Teacher

4. How many HOURS of the childs time is given to each of the following during the average SCHOOL day?

Home or Farm Duties None; Music 1 hr each day;

Work for pay, at Home Na; Work for pay, away from Home No
(Include here work for Board, Room, Lunch, clothes etc as well as wa

Home work on lessons 2; Hours per WEEK at Parties, Dances etc ;

5. If you cannot itemize below, give total as spending money here ;

How much cash (not earned above) do you GIVE this child each WEEK for:

LUNCH take lunch; SCHOOL SUPPLIES what needed; MOVIES not ver; POCKET MONEY very little;

6. Have you visited the high school this year? No; More than once? ;

7. How many of the childs teachers (this Year) have you met? None

8. What is your occupation? (If a man) Mercantile & farming

(If a woman) ____

9. What is your average yearly income? (approximately) $2000 00;

10. What was the approximate amount of taxes you paid last year? 700 00

11. If you own or are buying a home, here or elsewhere, check here (✓)

12. If you are living in rented property now, put a cross here ( )

13. If you have a car, check whether for Business(✓), or for Pleasure(✓

14. Does this child have free use of the car? ✓? Take it to school? yes

15. How many years have you lived in Arizona? 35

16. From what State or Country did you come to Arizona? Ind.

17. How can the Phoenix Union High School better serve the interests of the pupil here concerned? Feel perfectly free to say exactly what you think. It is very valuable for us to have your point of vies, especially since this report is unidentified.

More practical training especially in sewing and cooking and less Trigonometry and foreign languages etc. Students should specialize in the